CHILD LIFE AND THE CURRICULUM

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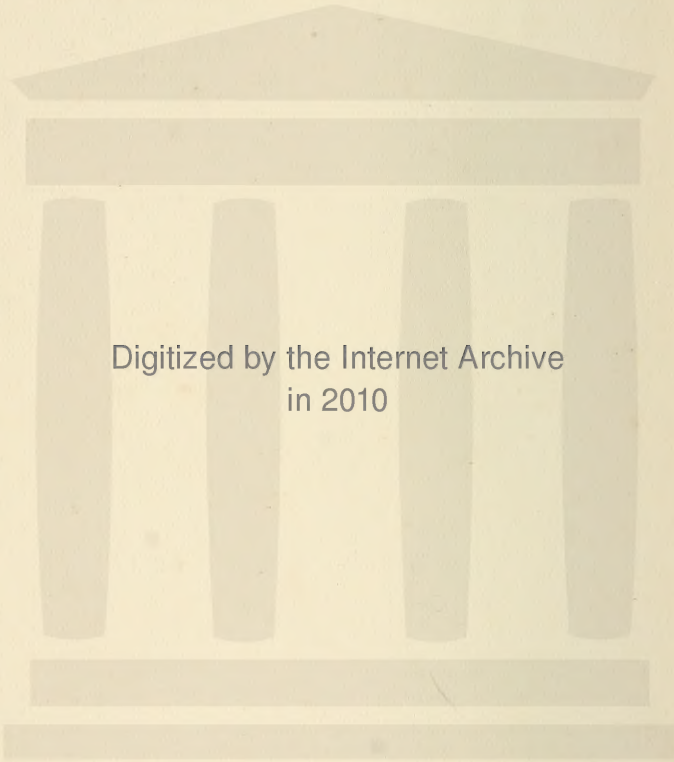

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CHILD LIFE AND THE CURRICULUM

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By

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Recent developments in home and community life insistently demand that children and adults be efficient in all wholesome activities. A higher order of service is required, and a more economical expenditure of time and energy is imperative. The elementary school cannot escape similar requirements. To present the reasonableness of a considerable change in the curriculum and to indicate the possibility of greater service on the part of the school is the purpose of author and publishers in issuing *Child Life and the Curriculum*

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PREFACE

BOBBY was one of my foremost pupils in a village high school. He was fourteen years old but small in stature. At times his face was radiant with boyish joy; at other times his face bore the serious demeanor of a judge. Bobby was one of the very first to reach the playground at recess time. After recess he was among the first to open his books for study. He played with those younger than himself because the younger ones played the more. In the classroom he worked with those older than himself because with these his good mind had more companionship. He was punctual, regular, and reliable in both work and play.

But before the close of the year a marked change took place in Bobby. He played less and studied less. Something was wrong with the boy — or with the school.

As his teacher, I had come directly from a classical college. I required all my students to take Latin and mathematics. English grammar and history also were emphasized. Hard work and vigorous drill characterized my school policy.

I wondered what caused the change in Bobby.

One day three of my grade teachers reported to me that Fred, known in the school and in the town as "the worst boy in school," had been asked by Bobby to join his gang. He declined, saying that that gang was too bad for him. My Bobby's gang too bad for Fred? Thus through Fred it was discovered that Bobby was the leader of a gang which had as one of its purposes: How to make swearing easy. These boys held regular and irregular meetings in a little covered bridge near the pastor's house. There they exercised in their self-chosen art.

Explanation of the changed attitude of my favorite student was now clear. The usual play at recess had not provided the needed activity. The serious school studies had

not given the boy opportunity for invention, self-direction, genuine inquiry into real life. This he craved, and the gang became his more effective school.

I give to Bobby and his gang the credit for suggesting to me the problem I have endeavored to present in this book. On this problem I have worked in public schools in Wakeman, Ohio, Akron, Ohio, and Albany, New York, and during the past twelve years in the University Elementary School conducted in connection with the School of Education at the University of Missouri. (1) We have boys and girls to educate; that is, to help them live more fully while boys and girls and also to prepare them to be more efficient in later life. (2) We have a traditional curriculum in our schools. The subject matter of this curriculum consists largely of what has been aptly called "tools." Much of this has become obsolete because, by its very nature, it is not closely connected with the rapidly changing life outside the school. (3) Then, too, we have social and industrial life about us, intense in its activities, and an environment full of physical phenomena of increasing interest to people as our civilization rapidly develops. Here is a strong appeal to the growing boy and girl. The subject matter of the traditional school or the subject matter of modern life may be used as the means of instructing boys and girls. The former has been predominant in most of our schools. The latter is presented in this book as the means that should be predominant in elementary schools.

In working out the details of this curriculum the effort has been, not, as some critics have erroneously judged, to get away from the traditional curriculum, but, on the positive side, to get as close as possible to the lives of children as found in the home and in the larger community. The subject matter of the traditional school and the subject matter of modern life must be judged by the same standard: that of helping make

boys and girls efficient in what they do in youth and to prepare them for efficiency in later life.

Unquestionably, adverse criticism upon the traditional curriculum is increasing, and there is evidence of a very marked tendency to demand that our public schools give more attention to current problems in home, community, and national life. In proposing a curriculum in tune with modern life, I have earnestly tried to be strictly consistent in theory and in practice. My discussion of the curriculum herein presented is virtually a report upon the actual conduct of a school during the past twelve years.

I am presenting this theory and practice of the elementary school curriculum not as a panacea for all the ills of elementary education. Far from it. But I do believe that the University Elementary School at Columbia, Missouri, has exhibited a very considerable amount of modern school practice that warrants the critical consideration of school officials, school teachers, and school communities.

I wish to acknowledge my greatest indebtedness for help in this work to the several hundred boys and girls who have been subjects in this experiment. Not all of these pupils or their parents have been wholly satisfied, but most of them have expressed great satisfaction. The results reported in Chapter Nineteen give evidence of this.

Several teachers in this school have contributed much to the development of this curriculum: Miss Margaret Sinclair, who has taught Grades I and II from the beginning of the school; Professor Ernest Horn, of the University of Iowa, once teacher and principal of this elementary school; Miss Katherine Helm, of Hannibal, Missouri, who was teacher of Grades III and IV for five years; Mr. H. H. Mecker, principal of the Lowell School in St. Louis, who was closely associated with the school for five years; Miss Matilda Dreifus, of the Ethical Culture School of New York City,

who taught Grades V and VI during one year; Mr. R. K. Watkins and Miss Katherine Hankins, instructors in school supervision at the University of Missouri, for three years teachers in this school; and Mrs. Dorothy Jones-Lewis, teacher of Grades V and VI for two years.

I am indebted to the many visitors from all parts of the country who have spent some time in the school and have made helpful criticisms. Of these I may name: Miss Flora J. Cooke, of the Francis W. Parker School of Chicago; Professor W. H. Kilpatrick, of Teachers College; Professor C. A. McMurry, of Peabody College for Teachers; Dr. M. B. Hillegas, Commissioner of Education for Vermont; Mrs. Ethel Dummer, of the Joint Committee on Education, Chicago; Mrs. William Templeton Johnson, of the Francis W. Parker School of San Diego, California.

Among many teachers who have adopted portions of the curriculum outlined in this book in their own schools and have returned helpful criticisms, I wish to name: Miss Nannie Wright, primary teacher in Mexico, Missouri; Miss Susan Dickinson Stone, principal of Ravinia School, North Chicago; Miss Frances Giddings, primary teacher in Francis W. Parker School of San Diego, California; Mr. Pryor Collings, County Superintendent of McDonald County, Missouri.

For helpful professional criticisms I am indebted to Professor W. H. Kilpatrick, of Teachers College; to Dean Frank P. Graves, of the University of Pennsylvania; to Professor Ernest Horn, of the University of Iowa; and to Professor C. A. Ellwood, of the University of Missouri.

I wish to acknowledge great help from Miss Laura Searcy, Supervisor of English at the University of Missouri High School, for reading the entire manuscript.

J. L. M.

Columbia, Missouri

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CHILD LIFE AND THE CURRICULUM

Statement Outline for Chapter One

A more appreciative attitude toward boys and girls is needed.
- Such books as *Being a Boy*, *Emmy Lou*, and *A Real Diary of a Real Boy* make a strong appeal.
- Pedagogical books need such a supplement.

The active boy is in striking contrast with the inactive school.
- The boy — and his sister — is active out of school; in school he is expected to be quiet.
- The boy is industrious out of school; in school little chance for real industry is provided.
- Whittier's *Barefoot Boy* and most other boys and girls have "knowledge never learned of schools"; too many are ignorant when measured by school standards.
- Out of school the boy is upright — loyal to his gang; in school he plays his game for schoolroom credit.

The child's point of view rather than the adult point of view should dominate in elementary education.
- The pedantry of the pedagogue is too conspicuous.
- "Ah, take the cash and let the credit go" is the philosophy of Omar Khayyám and of most children.
- The individual rather than the average is the boys' and girls' standard.

The problem of elementary education concerns itself with boys and girls.
- Approach this problem by thinking of teaching boys and girls rather than teaching reading, writing, and arithmetic.
- State the problem in terms of helping pupils to do better in their normal activities.

The University (of Missouri) Elementary School is conducted as a study of this problem.

CHAPTER ONE

The Pupils' School

APPRECIATIVE ATTITUDE NEEDED

"**Being a Boy.**" "One of the best things in the world to be is a boy; it requires no experience, though it needs some practice to be a good one. The disadvantage of the position is that it does not last long enough; it is soon over; just as you get used to being a boy, you have to be something else, with a good deal more work to do and not half so much fun. And yet every boy is anxious to be a man, and is very uneasy with the restrictions that are put upon him as a boy. . . . Boys in general would be very good farmers if the current notions about farming were not so very different from those they entertain. What passes for laziness is very often an unwillingness to farm in a particular way." [1] The author of this book then proceeds to picture the New England farmer driving away to attend to various matters in town while he tells his boy of many chores and bits of work about the house and farm that must be done, and adds that John can play ball after he has done up the chores. *Being a Boy* presents the experiences of a boy who struggles to be a real boy, and yet cannot be so because of the restrictions placed upon him by the well-intending but unappreciative father. The father sees farm work that must be done; to him the boy is one of several agencies for doing it. The boy sees himself as one who would both work and play, but in either case enjoy himself. To him the farm is a means of his living. Thus throughout the book the author endeavors to arouse in adults a more sympathetic appreciation for the boy.

[1] Warner, C. D., *Being a Boy*, pages 1–21.

The teacher who reads of this boy will doubtless associate with him his sister.

"**Emmy Lou.**" George Madden Martin pictures the pathetic struggles of a little girl in a school where girls and their brothers were not understood. Nor, indeed, did these little girls have any understanding of the school in which they were placed. All was new and strange to them. "Emmy Lou, laboriously copying digits, looked up. . . ."[1] She began to give attention to the little boy across the aisle who was making some signs to her. What were digits to such a little girl, and why should she copy them? No wonder it was a laborious task. Not all little boys and girls have the serious struggles of Emmy Lou. Not all teachers are so unsympathetic and inconsiderate as those with whom Emmy struggled so hard. Not all of the pictures presented in this story are true to life. They are presented for effect. But one cannot read *Emmy Lou* without wondering if most of the school life of little people is not too strange for them to be at all understood, and if teachers are not more concerned with their teaching than with their pupils.

"**A Real Diary of a Real Boy.**" Henry A. Shute writes that while rummaging an old closet in a shed chamber of his father's house, he unearthed a boy's record of his daily experiences. This record is presented in book form as *A Real Diary of a Real Boy*. Many would judge this diary as not the real work of a real boy. There is so much slang and so much uncouthness in the behavior that the boy is liable to be judged unreal. Throughout this diary the unconventional activities of boys are reported. The account pictures genuine characteristics of very active boys. It cannot fail to appeal strongly to adults to be more sympathetic with boys. One may at first be provoked at the

[1] Martin, G. M., *Emmy Lou*, page 1.

boy for fooling his father when his well-intending parent thought he would teach the boy to swim. The account merely represents what is probably true of many fathers, — a failure to keep pace with the development of their boys.

Pedagogical books and appreciation of children. The books cited above are three of many of this type.[1] Teachers and school men are disposed in these days to devote considerable time to the reading of works on school management, the psychology of the child, pedagogical methods, standardized tests, and the like. It is quite generally supposed that the development of teaching ability should be acquired through the reading and study of these educational writings. No reflection is intended upon these books, for some are very valuable; while others are less so. Most teachers read too few of them and do too little thinking about them. But it is a serious misfortune that so many of our teachers read such books only. Appreciation of children must be developed through a more direct study of children themselves, and through books which are less conventional and pedagogical in the description of children, but are more direct in the portrayal of the naïve activities of children. The over-serious attitude too frequently developed by reading strictly pedagogical books is a misfortune. Books of the type suggested above are needed to quicken the rank and file of teachers to a more ready understanding and appreciation of the normal activities of pupils.

THE ACTIVE BOY AND THE INACTIVE SCHOOL

The active boy — out of school. A real boy comes near to illustrating perpetual motion, provided this boy has none of the restrictions placed upon him as a boy. Look

[1] A partial list of such books is given at the close of this chapter.

for boys in the back yards, in the alleyways, in vacant lots; look for them in living rooms, on the playgrounds, in public places. Wherever these boys are found they are active in doing something. In his study of *The Boy and His Gang*, Puffer has pointed out that between 85 and 90 per cent of the interests of boys are in physical activity. Boys upon the city streets explain their pleasure in teasing the policeman in the words, "just to see the ginney chase us." It is complimentary rather than derogatory to boys and girls of elementary school age to wish them to be, first, well-developed little animals. Physically they are active; but they are more than animal. They show by their activities that they are mentally no less active. As Warner has said, the greatest thing in the world to be is a boy, but he is uneasy with the restrictions placed upon him as a boy.

In school, the boy cannot be so active. The repression of the school is the depression of the real boy, and there is very much repression in most schools. The very four walls of the schoolroom have a repressing influence upon most boys whose work must be done within those narrow limits, when the boy by nature demands greater liberty. Even the school grounds are too confining. The strait-jacket school desk, firmly screwed to the floor, is not a comfortable seat for most children. The arrangement of these desks in coördinate rows gives to the average boy a sense of being greatly restrained. It is probable that this stationary desk is as much out of place in the schoolroom as in the living room at home. Freedom of physical movement is an inalienable right of school children, so far as such movement does not infringe upon the rights of others. Further, how much real activity is provided in the work of the schoolroom? The usual arithmetic might provide much mental activity for adults; most pupils see in it little opportunity

for mental activity, especially when compared with the activities of boys engaged in their normal pursuits out of school. The content of arithmetic calls largely for passive learning rather than active thinking. In the usual recitation little provision is made for real activity, especially spontaneous activity, which is much more effective than that in response to questions and directions. The traditional school work is restrictive rather than conducive to activity. It is so much in contrast to the free life of boys and girls out of school, that there is little wonder that Emmy Lou found everything so strange and uninteresting.

The industrious boy — out of school. Boys like to play; so do girls. Boys and girls like to work, too, if that work is at all suited to them. " Boys in general would be very good farmers. . . ." But boys must be allowed to work somewhat under their own direction. Boys and girls have initiative, but that initiative is not always in the direction of the wish of their parents. Newsboys show a great deal of industry in their business. Errand boys go with great speed upon their missions. Most boys about the railway stations are alert for the opportunity to carry a piece of baggage. Some boys and girls overwork when left to their own direction. The recent Boy Scout movement is not mere play for the boys. That organization is well disposed toward work as well as play. The Camp Fire Girls devote themselves industriously to their social activities and to their bits of handiwork. Left largely to themselves, unrestricted by the particular wishes and directions of adults, children are indeed industrious as well as playful.

In school, pupils are quite frequently judged to be indisposed toward work. The laborious work of Emmy Lou in copying digits is typical of much of the work done by pupils in the traditional school. Either the child himself lays aside his normal nature out of school as soon as he enters

the schoolroom, or the school work itself has an unfavorable influence upon him. The large amount of attention given to devices to induce pupils to study is good evidence that pupils are indisposed to do the work assigned them. They are not so industrious as when let alone out of school. Moreover, most of the work done in school is done by specific assignment rather than by the initiative of the pupils when given an opportunity. Idleness often takes the place of industry. The explanation is probably found in the inappropriate work which the pupils are asked to do. Mischief often takes the place of wholesome play, largely due to the lack of opportunity to play. The school is essentially artificial for the boy. In such an artificial environment the boy is indisposed to be industrious. Naturally, however, the boy and the girl are well disposed toward both work and play.

The intelligent boy — out of school. Whittier's barefoot boy had

> Knowledge never learned of schools,
> Of the wild bee's morning chase,
> Of the wild flower's time and place,
> Flight of fowl and habitude
> Of the tenant of the wood.

The newsboy, the errand boy, and the office boy become well informed. They have quite an extended and accurate knowledge of a great variety of phases of practical life. Local politics are known by most boys, and many listen to conversation to such an extent that they become quite intelligent about national and foreign affairs. Girls know much about the household, food, clothing, and society. They become well acquainted with all those phases of life which immediately affect them.

In school there is considerable evidence that many boys and girls are not up to the " standard of intelligence " de-

sired. The traditional curriculum has fallen so far behind current life that by the standards of this traditional curriculum pupils are frequently judged inferior or failures. Retardation tables in our school reports show that a great many fall behind the pace set by those who are equal to this particular kind of work. Quite frequently the boy who fails in arithmetic is the one who is most quick and accurate in making change upon the street. Quite frequently the boy who is weak in geography is the one most capable in directing strangers about the city streets or acquainting them with the industrial activities of the town. Intelligence and ignorance have meaning only when specific reference is made to points of application. In one of the old readers there was a picture of a country boy in the city. He was represented as awkward and timid, unable to understand his surroundings. A companion picture showed the city girl in the country. She was no less ignorant of what seemed to be the simplest things in country life. These two pictures misrepresent the true intelligence of both boy and girl. There is serious danger that we measure the intelligence of our school children by their ability to add or subtract. Thus the boy who is normally intelligent in the commonplace affairs of active life is by the formal standards of school work judged dull and deficient. This need not mean that he lacks real efficiency.

The upright boy — out of school. Records of our juvenile courts and reform schools indicate that many boys are not upright in their behavior on the streets and in public places. But most of these juvenile offenses arise from a relation of the child to some form of adult life. It is commonly understood that within the gang there is the utmost honor among boys. Boys are true to one another. There is no " snitching " among them.

It need not be inferred that in school boys are not honorable

and upright. But there is a great deal which goes to show that boys and girls are so considered. In his *Real Diary*, the Real Boy repeatedly recorded, " beat in speling today." The truth was that he " beat " only because he cheated. He cheated only because he had been punished for telling the truth. Spelling conditions with possible prizes were conducive to such an attitude. Spelling was a game to him. He played his game as best he could. The school itself plays many tricks upon the boy to induce him to work. Games are played as means of inducing boys to study numbers. Rewards are given as inducements for study. Much of school work suggests that the boy endeavor to do better than his mate. There is an inducement to do anything one can to surpass, to outdo others, in place of an encouragement to measure one's ability today with that of yesterday. All this is due to the unnaturalness of school. There is little inclination for boys and girls to do anything out of school that is not just to those with whom they associate. Artificial school standards are very liable to lead to an artificial school attitude.

THE CHILD RATHER THAN THE ADULT

The pedantry of the pedagogue. Too many teachers display a pedantry repulsive to pupils. These teachers have not the great amount of erudition of which they would be pleased to boast. Within the formal and narrow traditional studies, there are many very puzzling problems for the pupils. It is comparatively easy for the pedagogue to be equal to these difficulties; and in giving explanations to the pupils, he may exhibit considerable superiority to them. The traditional teacher has every advantage; the pupil is handicapped at every turn. This situation and the lack of sympathetic appreciation suggested in the previous section have led many teachers to feel themselves above their

pupils. The teacher's desk upon the platform has been an evidence of this, but fortunately this arrangement is now passing. Authoritative and dictatorial management is still too prevalent. Instruction which consists largely of assigning tasks, hearing recitations, giving examinations, and then averaging the grades recorded for the pupils' abilities and accomplishments is still too commonly regarded as teaching. There is too little coöperation between teacher as leader and pupil as learner. The teacher who is afraid to coöperate with his pupils is not equal to his task. This pedantic attitude has won in the past. Fortunately it is being relegated to the past, but all too slowly.[1]

Cash rather than credit. Children are intensely active in the present and for the present. Adults foresee the future and work for that. From their own point of view, adults arrange problems in arithmetic and grammar which they deem worth while for the child. These school subjects do not function normally in the young child's life. The pupils have, therefore, no motive for study such as the adult is inclined to expect of them. In *Being a Boy*, Warner presents the attitude of the boy on sprouting potatoes in a dark cellar in contrast to salting the cattle in the distant pasture. The father easily appreciates the value of sprouting these potatoes. There is a future reference not appreciated by the boy. On the other hand, the boy sees certain immediate gains *to him* in going to the farther pasture to salt the cattle. The father disregards the present interests of the boy by answering his requests: "No, they don't need salting any more'n you do." Warner hints at a bit of good philosophy in the interests of the boy (and his sister) by adding: "When I was a boy on the farm, and I suppose it is so now, cattle were never salted half

[1] A humorous poem, "The Jolly Old Pedagogue," written by George Arnold, adds a touch of adverse criticism upon the pedantic pedagogue.

enough." A bit of Omar Khayyám's philosophy is the guide for many a boy:

> Some for the glories of this world; and some
> Sigh for the prophets' paradise to come.
> Ah, take the cash and let the credit go,
> Nor heed the rumble of a distant drum.

The individual rather than the average as standard. There is serious danger that the average, the median, or certain norms may be made the standard toward which pupils are to work, rather than mere aids to the professional student in his study of educational conditions. The adult is liable to judge in terms of averages rather than in terms of individual change. Standards of intellectual attainment and of moral conduct are too generally based on a supposed result from certain experiences. Standards should be of a flexible nature so as to take account of the stages of development of individuals. There is need of more judgment of results on the basis of the individual child's progress. A child understands and appreciates this kind of standard. He easily compares his present attainment with that of an earlier period. The child does not understand the average or median of the adult's standard. Comparisons are odious to the one less favorably compared. The adult sees two groups of pupils in relation to a median which divides the better half from the poorer half. Position in this latter class is odious to half the pupils thus unfavorably assigned, and does not stimulate them to better work.

Space does not permit the presentation of other points of contrast between the point of view of the child and that of the adult.

THE PROBLEM IN ELEMENTARY EDUCATION

Method of approach. Sympathetic and intelligent appreciation of the boy and girl; the contrast between intense

activity out of school and comparative inactivity within the school; the contrast between the viewpoints of child and adult, — these considerations suggest an approach to conception of the purpose of elementary education. It is this: Let us for the time forget that we have studied reading, writing, arithmetic, and others of the traditional subjects. Let us set aside the notion that we adults have attained to our present stage of development by virtue of our study of these traditional subjects. Let us not feel certain that our pupils can develop only by the course we have taken.

Statement of the problem. Face to face with her group of pupils, each teacher may formulate her problem in this way: *How can I help these boys and girls to do better in all those wholesome activities in which they normally engage?* This statement presents the point of view taken throughout this volume. The emphasis is upon helping rather than merely teaching; consideration is directed to boys and girls as individuals, not as groups and averages; pupils are helped to do better than they have done before, rather than to compete with others; the subjects for study are the normal experiences of children and people in whom they are concerned (limited, of course, to wholesome activities) in place of the formal Three R's.[1]

AN EXPERIMENT AT THE UNIVERSITY OF MISSOURI

A professional laboratory. The School of Education at the University of Missouri was organized in the fall of 1903 under the deanship of Dr. A. Ross Hill, now president of the university. In 1904 a high school was organized, and

[1] This statement does not mean an effort to get away from the traditional curriculum; it does mean an effort to get close to the children in their activities out of school. The subject matter of the past is regarded only when it functions in the work of the pupils.

in 1905 the elementary school was opened. The primary purpose of the high school is the training of prospective secondary-school teachers. It is essentially a practice school. In only a secondary way can it serve as a laboratory for professional study. The elementary school is not a practice school for the training of elementary-school teachers, but serves primarily as a professional laboratory. While the pupils serve as subjects, without which the professional study could not be conducted, they are not sacrificed for the sake of the experiment, as is indicated in the results presented in Chapter Nineteen.

Initial steps. The school opened in 1905, enrolling pupils in the first three grades. The director of the school had not then formulated his problem, but his previous experience in public-school work had opened up the content of the curriculum as *the* important field for study in elementary education.

The problem of the curriculum. For the first two years rearrangement of the traditional subjects was studied. This was unsatisfactory. It was not sufficiently constructive. In the fall of 1907 a tentative outline of a course for eight grades had been formulated as a basis for more constructive study. The content of this course — or, more appropriately, series of studies — was taken directly from the out-of-school interests and activities of children, but at first was without any organization. Before the close of the year the studies had been arranged for convenience in four groups, as now outlined in Chapter Seventeen. While this four-group arrangement has been maintained since that time, the subdivisions have been very flexible and have not been allowed to crystallize in a fixed organization.

The curriculum has been the central problem for professional study. All problems of school management and methods have been regarded as strictly subordinate and

have therefore been given only incidental attention. This study of management and method is the more effective as it is made subservient to the larger problem of the curriculum; management and method are means of accomplishing the work outlined in the curriculum.

Administration and supervision. The immediate direction of this school has, from its beginning, been the work of the professor of school supervision in the School of Education. He has been allowed large liberty in governing the policy of the school. His advisers have been chiefly the teachers in this school and those in public schools who have coöperated with him or who have been students at the university. Hundreds of visiting teachers and many parents have made suggestions.

Supervision of the school has been, first, in preparation of outlines such as those given in Chapter Seventeen. Teachers are expected to study these outlines, not to follow them. Each teacher is allowed great freedom in her own schedule, management, and method. The curriculum and the policy of the school encourage this. Supervision is given by frequent conferences with individual teachers, rather than through regular teachers' meetings.

The teachers. The school of about one hundred pupils is taught by four teachers devoting full time, and usually a fifth teacher, a graduate student with previous experience as teacher, who devotes one-half time to the school. No specific qualifications are required of these teachers. Most of them have had experience in public schools. Some have had professional training; some have had none at all. The endeavor has been to appoint no one who was not open to come into full sympathy with the principles and policies of the school. One serious interruption of the work has been the frequent change of teachers. Low salaries, marriage, and inability to advance the professional study have

occasioned these changes to a greater degree than is current in public schools.

The pupils and organization. The pupils come largely from the district in which the school is situated. Some come from other sections of the little city of Columbia, and a few come from near-by rural districts. No selection is evident save as the small annual tuition fee of ten dollars prevents some from attending. The school admits children six years of age into the first grade.[1] Seven grades are provided, and work is being prepared for the eighth grade. The school is organized into grades of the traditional type. However, these grades are really groups of children who are advanced from grade to grade on the basis of a year's work rather than the completion of the work assigned to a given grade.[2] In the main, each of four teachers has two consecutive grades. The two grades form one large group and work together as one, so far as possible. There is no departmental work as organized in many schools.

Building and furnishings. The five-thousand-dollar frame building is unique in its construction. The building is 50 feet long and 50 feet wide, two stories high, and has a basement. One half of the first floor is called the Fountain Room. An aquarium 14 feet long, 5 feet wide, and 3 feet deep, with a fountain at the south end of the room, gives it the name. This aquarium is the center for studies in nature and becomes a pleasing bit of schoolroom decoration. Around the walls of the Fountain Room are exhibit cases, where the work of all the pupils is exhibited. This exhibit is continual and not for special occasions. As new projects are completed

[1] Until September, 1918, the school provided no kindergarten because of lack of schoolroom space, of funds for maintenance, and of time for study of this preëlementary stage of schooling. Since September, 1918, the sixth and seventh grades have been organized with the ninth grade into a junior high school.

[2] See plan for promotion presented in Chapter Eleven.

they take the place of the old. This room serves as an auditorium. There are no seats. None are needed, except for visitors. When there is to be an assembly the pupils come from their rooms, each bringing his chair. At the close of these frequent, but not daily, assemblies, the pupils take their chairs with them and the floor is again free for folk dancing and games. This Fountain Room is the social center of the school and is the most serviceable room in the building.

On the second floor at the top of the open stairway is the library, 25 feet by 35 feet in area. Here the upper-grade pupils do most of their work.

There are four classrooms or workrooms, one on the first floor and three on the second. These rooms are supplied with chairs and tables easily moved about by pupils, instead of the formal school desks screwed to the floor.

Equipment. Except for the library, the meager equipment is a surprise to the many visitors. The library contains about twenty-five hundred volumes, besides about one hundred boxes of clippings and pictures. These books, with scarcely a duplicate, are a substitute for texts.

A museum of illustrative material collected from various industrial establishments and other sources contributes to the work done. Boys in bench work and girls in domestic science do their work in the high-school building. The Elementary School is not provided with any shop or science apparatus. With an excellent library and full liberty for excursions and field work, school work is not seriously handicapped because of meager equipment.

Leading features. 1. The school does not study reading, writing, arithmetic, and others of the traditional subjects. Subjects for study are taken directly from life outside of school.

2. The school does not use textbooks, but has an extensive library to supplement studies made on excursions and field trips.

3. The school has no recitations for testing students on assignments previously made. Conferences are held irregularly, though usually daily, in which pupils pool their findings made in the library or upon special observation. These conferences seldom drag, inasmuch as in the study of timely topics pupils have much to report.

4. No assignments are made as lessons to be prepared. Assignments are replaced by developing, in these conferences, new problems or new material on old problems. Opportunities are pointed out, rather than tasks assigned. The former is more conducive to industrious application than the latter.

5. No final examinations or irregular tests are used to discover what the pupil has done or to spur him on to further accomplishment. Daily work is a sufficient test, and cooperative study of teacher and pupil is more effective than any artificial stimulus.

Supplementary Readings

Aldrich, T. B. *Story of a Bad Boy.*
Bacon, Josephine D. *The Memoirs of a Baby.*
—— *The Madness of Philip.*
Barrie, J. M. *Sentimental Tommy.*
Bell, J. J. *Wee Macgreegor.*
Connor, Ralph. *Glengarry School Days.*
Eggleston, Edward. *Hoosier School Boy.*
—— *Hoosier School Master.*
Gilder, Jeannette. *Autobiography of a Tomboy.*
Gilson, R. R. *The Morning Glow.*
Graham, Kenneth. *The Golden Age.*
Gunckel, J. E. *Boyville.*
Harker, Lizzie Allen. *Concerning Paul and Fiametta.*
Howells, W. D. *A Boy's Town.*

HUGHES, THOMAS. *Tom Brown at Rugby.*
—— *Tom Brown's School Days.*
JOHNSON, O. M. *Tennessee Shad.*
JORDAN, KATE. *May Iverson — Her Book.*
KELLY, MYRA. *Little Citizens.*
KIPLING, RUDYARD. *Captains Courageous.*
—— *Stalky and Company.*
LAUGHLIN, ELMER. *Johnnie.*
MCCLUNG, NELLIE L. *Sowing Seeds in Danny.*
MACDONALD, GEORGE. *Sir Gibbie.*
MARTIN, GEORGE M. *Emmy Lou.*
—— *Emmy Lou's Road to Grace.*
PHILLIPS, W. S. *Just About a Boy.*
PRYCE, RICHARD. *David Penstephen.*
QUICK, HERBERT. *The Brown Mouse.*
RICHARDS, T. E. *When I Was Your Age.*
SHUTE, HENRY A. *A Real Diary of a Real Boy.*
SMITH, W. H. *Evolution of Dodd.*
STUART, RUTH MCENERY. *Sonny.*
TARKINGTON, BOOTH. *Penrod.*
—— *Penrod and Sam.*
—— *Seventeen.*
TWAIN, MARK. *Huckleberry Finn.*
—— *Tom Sawyer.*
VENABLE, W. H. *Tom Tad.*
WARNER, CHARLES DUDLEY. *Being a Boy.*
WHITE, S. E. *Adventures of Bobby Orde.*
WHITE, WILLIAM ALLEN. *Court of Boyville.*
WIGGIN, KATE DOUGLAS. *Rebecca of Sunnybrook Farm.*
WRAY, ANGELINA. *Jean Mitchell's School.*
ZOLLINGER, G. *Widow O'Callaghan's Boys.*

Statement Outline for Chapter Two

Some justification is given for the continuance of the traditional curriculum.
- The content of this curriculum has been justified rather than controlled.
- Religious or secular justification has proved inadequate.
- Three theories are prominent.

The Culture Epoch theory is prominent.
- This theory asserts that the development of the individual corresponds approximately with the development of the race.
- Here is the source of the principle of doubtful educational application "from the simple to the complex."
- The theory may be criticized as a worship of the past rather than a consideration of the child's present good.
- The theory of race recapitulation suggests one sound principle; the sense of need is the best occasion for study.

The theory of formal discipline wields great influence.
- The theory is essentially this: improvement of ability in one subject means improvement of ability in other subjects.
- Formal discipline is used as the argument of last resort in support of the traditional subjects.
- The real issue is the transfer of schoolroom abilities into social values.

Correlation of school subjects supports the traditional curriculum.
- The term means only an interrelation between school subjects.
- The purposes of correlation are located in economy in teaching and interest of pupils.
- In the customary use of correlation lies a serious abuse.
- Natural correlation is found in the study of the problems of community life.

CHAPTER TWO

Justification for the Traditional Curriculum

BASIS FOR JUSTIFICATION

Justification rather than control. The traditional curriculum consists of reading, writing, arithmetic, spelling, geography, and other such subjects usually found in elementary schools. It is needless at this point to be at all definite in indicating the scope and character of this traditional curriculum and thus distinguish it from any new or modern one. There can be no distinct line of demarcation between the two. There are elements that overlap, though any particular curriculum may be characteristically traditional or conspicuously modern.

The traditional curriculum will be readily accepted as one of slow development. Some new subjects have gained a place in this curriculum, have had an influence upon other subjects, and then have discontinued as such. But in the main the Three R's and a few closely associated subjects have dominated, though in character they have slowly undergone various modifications. These changes in the curriculum have followed, somewhat tardily, changes in society and in industry. Thus the traditional curriculum is a growth, not a construction; a product of social and industrial activities rather than an instrument in the improvement of such activities. We are, therefore, unable to look for ideas, principles, or policies that control in the selection and organization of this curriculum; but, on the other hand, we may look for certain principles that are assumed as the justification for the continued use of this curriculum. Such principles may be given as an answer to the question: Why has the traditional curriculum continued so long in use?

Religious and secular bases.[1] Prior to the nineteenth century, elementary education was largely on a religious basis. The hornbook and the New England primer were representative books used in schools of earlier times. Their contents were religious in character in accordance with the ideals of the times. But secular interests were developing, and in the nineteenth century became quite pronounced. In recent years elementary education has shown the effects of industrial and vocational training given in higher schools. The secular has become strictly dominant.

Three theories. Yet it must be recognized that there was much in the reading, writing, and arithmetic of earlier years that was not strictly religious in nature, and that in the geography, history, and language of more recent years there is much that is not of the more practical sort in accordance with modern tendencies. We may, therefore, look for some justification for holding to the traditional school curriculum on other than the religious and the secular or practical bases. This justification is found in three educational theories that have been so generally accepted as valid that no serious question has been raised as to the ineffectiveness of the traditional curriculum and the possibility of effecting a marked improvement by a rather radical departure from custom. These three theories are:

1. The culture-epoch theory.
2. The theory of formal discipline.
3. The theory of correlation.

An attempt is made in this chapter not to discuss these three theories at all extensively, but rather to point out briefly the influence which they have had on the traditional curriculum and to suggest how inapplicable they are in a modern curriculum taken directly from contemporary life as proposed in later chapters of this volume.

[1] See Parker, S. C., *The History of Modern Elementary Education.*

THE CULTURE-EPOCH THEORY

The theory. Various observations of the development of animal organisms have led some students to the belief that the individual in its own development passes through the various stages through which the race has passed in reaching the stage represented by the individual. Man is no exception to this general rule, and in his individual development he recapitulates the stages through which the human race has passed in its development from primitive life to present civilization. This merely means that the dominant interests of the child at different stages in his own development are the same as those that actuated the human race at corresponding stages.

Educational application. Various stages have been assigned to the development of civilization by those who write upon the history of humanity. Three stages have been the more common when applied to child development: "... first, the predominance of emotional imagination, — the mythical, animistic phase of mind; second, the development of a matter-of-fact interest expressed in a tendency to observe, to collect, to make utilitarian constructions; third, the emerging of conscious reflection, characterized by interest in abstraction and generalization." [1] Belief in such stages on the part of superintendents and teachers is largely responsible for reading courses that begin with the myth and fairy tale in the lower grades and close with addresses of statesmen in the upper grades. Here is also the explanation for the history course that begins in the lower grades with stories of primitive man and reaches recent American history only in the upper grades. A second cycle of this history is seen in the four years' high school course: 1, ancient; 2, medieval and modern; 3, Eng-

[1] Dewey, J., article in Monroe's *Cyclopedia of Education.*

lish; 4, American. Much language work has been arranged on this principle. Representative of such are the directions for first- and second-grade language for the schools of New York State: "Oral reproduction of myths, hero tales, fairy and folk stories, stories of primitive life, and stories of the life of today." [1]

Representative of primitive life as the center of various school studies is the course of study for Horace Mann School for 1906.[2] A comparison of the curriculum of this school in more recent years shows much less emphasis given to the life of primitive people as a basis for the study of present life. Belief in the application of this culture-epoch program is largely responsible for the historical approach in the study of present-day problems, for the principle of procedure from the simple to the complex. It is assumed that children would have more interest in the sickle as an instrument in the harvest field than in the modern harvester; and that the effective course for instruction would be from the simple sickle to the complex harvester.

A word of criticism. This culture-epoch theory and its application to school work appeals to many by reason of its indefiniteness and its seemingly scholarly basis. The theory must be credited as an earnest attempt to get at the true development of the child to serve as a basis for the selection of courses of study. But against this credit must be placed the serious neglect of the child's immediate present, his physical and social environment so wholly foreign to that of his race in earlier stages. Not history and anthropology so much as contemporary psychology and sociology are adequate guides in a child's development. Indeed, the culture-epoch order in the selection and arrangement of subject matter is in conflict with the principle of apper-

[1] *Syllabus for Elementary Schools, New York*, 1910.
[2] See *Teachers College Record* for January, 1906, page 114.

ception. The child experiences first his own immediate present. He can become acquainted with the remote past, which he cannot experience, only through his knowledge of the present, which he is experiencing.

The culture-epoch theory is a worship of the past. The biological correspondence of individual development and racial development must not be overtaxed. "It may be that our preconceived ideas of the stages through which the organism passed in progressing from the amœba to man have led us to imagine that we see these stages mirrored in the developing individual."[1] And it is probable that the adult viewpoint, that of seeing school work logically and chronologically arranged, is responsible for the assumed educational significance of this theory. No attempt can be made here to present facts or opinions sufficient to justify or condemn this theory. But to reject the theory does mean: 1, to reject history stories as central or even prominent in elementary school work; 2, to reject a historical approach to the study of present activities; 3, to reject the policy of presenting primitive life as more simple and more interesting to children than present life.

A suggestion: Need should control. The rejection of the culture-epoch theory as a leading principle in the selection and organization of the content of school subjects need not carry with it the rejection of every element in that theory. One principle included in the theory is this: The human race in primitive times lived a simple life; but even slight changes in the environment called for some struggle to readjust to meet the new situations. Necessity has always been the mother of invention. In the face of a real need our race studied to secure better adjustment. This principle is probably included in most progressive educational thought today. Consider arithmetic, first, as

[1] Yerkes, R. M., *Introduction to Psychology*, page 231.

it has developed; then, as it is now treated. "Arithmetic started when it ceased to be a question of this group of savage warriors being more than that, and began to be recognized that this group was three and that two; when it was no longer a matter of a stone ax being worth a handful of arrow heads, but one of an exchange of one ax for eight arrows." [1] Simple operations were followed by a crude system of notation. In all such cases it was a matter of meeting a real need. "There is luck in odd numbers," indicates one use Pythagoras and his followers made of numbers. The Hanseatic League in the fourteenth century found a real need for schools of arithmetic. Not until the time of Pestalozzi was it found that arithmetic could be taught to little people in the common schools.[2] Pestalozzi, so efficient in teaching, brought to younger minds arithmetic which was not at all of use to them, as it had been to the Hanseatic League. Henceforth children were taught *arithmetic as an exercise needed for general training rather than for immediately practical needs.* The leading value usually assigned to arithmetic is its utility in life. But careful reflection upon our relations with people and with things shows us how extensively quantity enters our experience, even the experience of little children; but the arithmetic taught is largely that for use by adults, and answers but little to needs felt by the child.

If now we apply religiously the culture-epoch theory in teaching number concepts and quantitative operations we would, first, teach pupils numbers *as need arises;* and, second, use all the crudities of counting, of notation, and of numeration of early years. The former would be most commendable; the latter, ridiculous. But to teach *as need arises* is a principle that comes to us more positively from

[1] Smith D. E., *The Teaching of Elementary Mathematics*, page 45.
[2] *Ibid.*, page 63.

our direct study of the pupil in our efforts to help him in what he is now doing than from the culture-epoch theory. Ability to analyze conditions and thus *feel the need* of readjustment depends upon one's experience. There is much common sense, as well as scientific truth, in the principle of apperception, but this psychological principle is far from insisting upon a historical approach in the study of contemporary problems.

The culture-epoch theory has one sound element: The sense of need is the best occasion for study; but this principle is not patented by the culture-epoch theory. It comes more directly from our recognition of conditions in present life.

FORMAL DISCIPLINE

The theory. Training in one line of mental activity improves abilities in another line of mental activity. This is, in brief, the theory which, to a very great extent, has been assumed to be one justification for the continued use of the traditional curriculum. The pupil who develops accuracy and rapidity in fourth-grade work in fractions improves his ability to be accurate in reciting the dates of the ten decisive battles of the world and improves also his ability to be rapid in parsing nouns and bounding states. Improvement of ability in one school subject means improvement of ability in another school subject. This theory of formal discipline is ordinarily limited to mental activities as carried on in school. To carry the theory over into real life seems not yet attempted. Training in mental activity needed for the robbing of banks is not usually regarded as that which would improve the mental activity needed in effective teaching of a Sunday-school class. The theory of formal discipline is practically limited to the school arts, whatever be the bounds of the principle.

Formal discipline in the curriculum. Formal discipline in school subjects becomes prominent whenever the content of such subjects becomes of little or no functional value due to changes in the lives of people to which these subjects once contributed real service. For example, just so soon as arithmetic ceases to function directly in the affairs of people, as it did in the promotion of business under the direction of the Hanseatic League, just so soon is formal discipline assigned as the chief value of arithmetic. That is, even if the study of arithmetic does not contribute directly to the service of the boy on the farm or of the girl stenographer, formal discipline justifies the continuance of arithmetic on the ground that the boy is developing accuracy, which is seen first in its effect upon the boy's work in other school subjects and probably later in planting corn and breeding stock, and that the prospective stenographer becomes more rapid in spelling and thus later more efficient in her office. To what extent does the arithmetic of the school positively contribute to improvement in the practical affairs of people in life outside of school? No scientifically accurate answer is yet given, but there is an increasing amount of comment to the effect that school arithmetic functions far less than it has been credited with doing. And yet in the past fifteen years there has been scarcely any diminution of the time given to arithmetic compared with other school subjects. In 1904, 17.3 per cent of school time was given to arithmetic; in 1910, 15.2 per cent; and in 1915, 15.9.[1]

Most of the reading in school, in so far as it is class and oral reading, and much of it is such, is really continued on the ground of its formal disciplinary value rather than its contribution to the welfare of the pupil, as the leisure reading of the adult contributes to his welfare. The reading

[1] See Table VII, page 211.

lesson as assigned, studied, and recited upon by oral reading in class and supplemented by discussion, cannot be supported as an activity definitely intended to meet a real need. It is a school exercise without a vital purpose. Formal discipline is its assumed justification.

Spelling lessons are essentially exercises in which formal discipline is provided. Words are selected from reading books, the enjoyment of which does not depend upon spelling at all. Lists of words misspelled by the pupils in composition are studied; these errors are noted and corrections are made without any regard to the frequency of occurrence of such words in the compositions of these pupils. The spelling of words as one of the school subjects is an exercise for its general effects rather than intended to meet some specific need.

Language exercises, grammatical analysis, composition work, and even writing by the Spencerian, Palmer, Vertical, or some other system, all are retained among the school arts much more as general discipline than because they function in meeting real needs either in the immediate present or the remote future.

Geography is a study of the world as the home of man. The texts used include the farthermost islands of the sea and all the districts near home. The geography must cover the ground, must survey the whole world, must be encyclopedic that it may meet the needs of schools in all localities. This geographical account must be more than a place, or space, survey: it includes a description of the activities of peoples. These descriptions are the more valued as they are the more inclusive. But the size of the book, for school purposes, is limited, and therefore the descriptions of important as well as unimportant activities are limited to paragraphs or even single statements. As geography this inclusive survey is unavoidable. In the use of these geog-

raphy texts appears the formal-discipline theory. Largely on this basis do the school authorities guide the pupils through this logically organized mass of material. Most courses of study include this whole range of geography, evidently without reference to genuine needs.

Attempt to discard any one of the subjects in the traditional curriculum on the ground that it does not meet real needs, and objection is promptly made on the basis that the subject has disciplinary value.

The real issue. The correlations studied in this problem of formal discipline have been largely limited to schoolroom subjects and certain specified mental activities commonly associated with them, such as memory, attention, and visual apprehension. The effect of this sort of scientific study is to strengthen the impression among school teachers, school administrators, and school communities that these formal school subjects contain *the* subject matter worth studying and that through them faculties of memory, attention, reason, etc., are to be developed. The theory of the modern curriculum presented in this volume leads to two propositions as to the real issue involved in this question of formal discipline.

1. So long as the traditional Three-R subjects constitute the curriculum of our schools, the question of formal discipline should be this: To what extent does improvement of abilities in these school subjects carry over into various activities in real life? Suppose it be proved to the satisfaction of all that improvement in ability of pupils to multiply complex fractions is transferred to the language exercise of selecting nouns in a page of literature. We are not yet assured that an acceptable method of training stenographers, housekeepers, and messenger boys is to give them training in the multiplying of complex fractions. We have yet to study the correlation of either one of these with abilities

called for in stenographers, housekeepers, or messenger boys. Indeed, general training and formal discipline are not ultimately satisfying. We are concerned with abilities functioning in particular cases. General ability never functions. In real life we are not concerned with general notions, but with particular reactions.[1] If, therefore, the complex fraction as one chapter in our school arithmetic continues to be subject matter for school work, we should feel under obligation to inquire as to the extent to which improvement of ability in mental activity here involved carries over into an improvement of ability in mental activity functioning in stenographic work. But the contention in this volume is that the traditional formal school subjects must soon give way to studies of life activities. In such case the question of formal discipline changes.

2. When our school studies become essentially studies of particular activities of life outside of school, the question of formal discipline gives way to the question of the extent to which the school activities can be identified in kind with the activities in which pupils will be engaged later, and the question of identity of attitude and method of response. This proposition may seem to beg the whole question. On the other hand, it merely limits quite definitely the problem and expresses it in terms of life acts rather than in terms of school arts. The first part is a quantitative problem — counting the frequency of occurrence of a given activity in school and in real life outside of school; the second part is at first a qualitative problem — defining the attitude and method through which individuals show efficiency in school work and in their activities out of school.[2] Sixth-grade pupils are studying the large problem of transportation.

[1] Compare the position taken by McMurry on the general notion as the goal of instruction, in his *Method of the Recitation*.

[2] For a brief discussion of these elements of efficiency, see pages 163–166.

The real issue now is: How does improvement in ability in studying this problem carry over for the girl who later enters stenographic work in an office?

Formal discipline in traditional school studies has received attention at the sacrifice of social values of an improved curriculum. Reject formal discipline as a principle of control in new constructions or of justification for the old curriculum, and each subject in the course of study can retain its place only to the extent that it fulfills specific purposes. The question of relative social values must be ever present. Indeed, new subject matter as studies in terms of real life must be welcomed to replace the old if its social value proves superior.

CORRELATION OF SCHOOL SUBJECTS

The term. Correlation is essentially an interrelation between two or more school subjects. This co-relation admits of an organization of school work about one subject as central, then about another as central. It also allows several studies to be related as coördinate. Correlation is also applied to the interrelating of divisions of a subject, and also to the relation of school work to life activities out of school.

Purposes of correlation. Correlation is primarily a means of economy. In early schools there was no problem of correlation; school subjects were so limited that pressure needed no relief through a scheme of correlation. In more recent years the curriculum of the school has become so crowded with different subjects that an effort has been made to so relate the subjects that better economy of time and effort can be effected. More frequently, however, two other reasons are assigned, viz., interest of pupils in one subject is increased if a second subject is related at the time of instruction; and the difficulties of one subject are

often simplified if a second subject is seen to be related. But greater interest and more ready comprehension are essentially means to better economy of time and effort by both teacher and pupil. Without correlation special methods and unique devices might be used to interest the pupil and to facilitate comprehension.

Use and abuse of correlation. Various are the schemes of correlation. The curriculum of Horace Mann School in 1906 [1] shows the relation of the various activities of the first grade to the study of primitive life. Here primitive life was central. Closely related to this were the other studies: manual training, literature reading, nature study, art, arithmetic, music, and physical education.

Frequently in the intermediate or upper grades geography is taken as central. Other studies for a time are controlled by the course in geography. For example, twenty lessons are given to the study of Italy. Language, writing, drawing, reading, and arithmetic are correlated. The twelfth lesson is on a part of Venice. The geography lesson is an examination of the Rialto Bridge, St. Mark's Cathedral, the Campanile, and the Clock Tower. The reading class reads *The Merchant of Venice.* The language work is a composition on the character of Portia. The subject for drawing is any one of the four buildings. In arithmetic the pupils calculate the comparative heights of these four structures studied.

In this use of correlation lies its abuse. Arbitrarily relating two or more subjects soon reduces the relation to mere form. Calculating the relative heights of the buildings in the correlation scheme referred to above belongs to the study of those buildings, if worth while at all, without reference to the name of the subject in which the study is being made. The formal subjects of the traditional school

[1] *Teachers College Record,* Vol. VII, No. 1.

admit of this arbitrary correlation. In most of the geography, arithmetical work is possible. Language study may be connected with any reading lesson. Drawing may be related to history. Any two of the subjects may at any time be more or less related. Once allow this artificial relating of school subjects to get a start and correlation becomes a fetish.

But artificiality in its use is not the only abuse. If correlation is used as a means of enhancing interest and facilitating comprehension there appears at once a serious question as to the appropriateness of the subject matter. This subject matter is evidently not appreciated by the pupil as meeting his real needs and is experienced as something beyond his immediate ability to comprehend.

This whole problem of correlation arises by reason of the formality and the artificiality of the school course of study. In correlation appears an attempt to counteract the serious errors already made in the inappropriate subject matter selected and arranged as the adult reviews his experience, instead of that subject matter which the child is now facing in his struggles for adequate adjustment.

Natural correlation. The best correlation scheme results when teachers make no conscious attempt to correlate, but when they push the study of a really vital problem to fully meet their needs. Correlation will be natural when the problem studied belongs to normal life.

We may first note the correlation of that subject matter which now constitutes our school subjects. In the study of the problem of transportation the pupil cannot escape a considerable study of what is now included in geography. Transportation has to do with places. A pupil must read extensively if he studies at all thoroughly this problem of transportation. Arithmetical work cannot be escaped, for quantitative problems are involved. Drawing and composi-

tion, as well as oral expression, are helpful instruments in this study. Bits of historical development of means of transportation may contribute some interest. All this correlation would be arbitrary and would soon become an empty form were transportation used as the opportunity for relating geographical, historical, and arithmetical subject matter. Center attention upon the large problem of transportation, and correlation will take care of itself.

A second type of correlation may be noted, though it as quickly disappears. If the school curriculum were to consist essentially of problems of contemporary life one might seek a scheme of correlation of these various problems or a relation of them as school subjects to life activities out of school. But no sooner does one enter upon the study of a life problem than the whole notion of correlation vanishes. The problem of transportation calls for some consideration of mining as a source of production; of steel and iron works as a means in manufacturing; of farming as one place for consumption of articles prepared. The problem of transportation is not adequately studied without taking note of the conditions that call for transportation. This correlation should not be planned in advance as such. It is important only to study transportation so far as the interests, needs, and abilities of the pupils warrant.

CULTURE-EPOCH THEORY

Supplementary Readings

BAGLEY, W. C. *The Educative Process*, pages 184–202.

BOLTON, F. E. *Principles of Education*, pages 63–118.

DEWEY, J. Article in Monroe's *Cyclopedia of Education*.

HENDERSON, E. N. *A Text-book in the Principles of Education*, pages 163–189.

SHULER, E. W. "The Passing of the Recapitulation Theory." *Educational Review*, Vol. 44, pages 191–196.

General References

Baldwin, J. W. *Mental Development*, pages 20–35.
Chamberlain, A. F. *The Child: A Study in the Evolution of Man*, pages 29–106.
Davidson, P. E. *The Recapitulation Theory and Human Infancy.*
De Garmo, C. *Herbart and the Herbartians*, pages 107–129.
Dewey, McMurry, and others. Articles in *First* and *Second Herbartian Year Book.*
Dopp, Katherine. *Tree Dwellers*, Preface and Contents.
Hall, G. S. *Adolescence*, Vol. II.
Kirkpatrick, E. A. *Fundamentals of Child Study*, pages 65–286.
Smith, D. E. *The Teaching of Elementary Mathematics*, pages 42–70.
Thorndike, E. L. *Educational Psychology*, Vol. I., Chapter XVI.
Vincent, G. E. *The Social Mind and Education.*

FORMAL DISCIPLINE

Supplementary Readings

Bagley, W. C. *The Educative Process*, pages 203–224.
Bolton, F. E. *Principles of Education*, pages 736–781.
Dewey, J. *Democracy and Education*, pages 63–80.
Heck, W. H. *Mental Discipline and Educational Values.*
Henderson, E. N. *A Text-book in the Principles of Education*, pages 283–317. Article in Monroe's *Cyclopedia of Education.*
Judd, C. H. *Psychology of High School Subjects*, pages 392–435.

General References

Bennet, C. J. *Formal Discipline.*
Briggs, T. H. "Formal English Grammar as a Discipline." See *Teachers College Record*, Vol. XIV, No. 4, 1913.
Rugg, H. O. *The Experimental Determination of Mental Discipline in School Studies.*
Thorndike, E. L. *Educational Psychology*, Vol. II, Chapter XII.

CORRELATION

Supplementary Readings

Bagley, W. C. *The Educative Process*, pages 203–217.
Course of Study for Elementary Schools. New York State Educational Department, 1910.

De Garmo, C. *Herbart and the Herbartians*, pages 215–227.
Henderson, E. N. Articles on "Correlation" and "Concentration" in Monroe's *Cyclopedia of Education*.
"Horace Mann School — Course of Study." *Teachers College Record*, Vol. VII, No. 1.
Judd, C. H. "Types of Correlation." *Elementary School Journal*, Vol. 12, pages 34–39.
McMurry, C. A. *General Method*, pages 162–213.
Rein, W. *Outlines of Pedagogics*, pages 65–92.
Report of the Committee of Fifteen.
Report of the Committee of Ten.

Statement Outline for Chapter Three

Withdrawal from school may be interpreted as:
- Unrelated to attendance.
- An index of sufficiency in the pupil.
- An index of efficiency in the school.

The situation as to withdrawals has attracted attention.
- General observation convinces one of an unfavorable situation.
- The reports of the Commissioner of Education show how limited is the schooling of many.
- Scientific studies have led to rather definite conclusions:
  - Over age and withdrawal have high correlation.
  - Large numbers of pupils complete only about one half of the school course.
  - The retarded pupil leaves school.
  - Withdrawal is related to low class standing.

Causes assigned for withdrawal need further study.
- Withdrawal measures school efficiency.
- The need of work, desire for activity, indifference, etc., as the usual causes given, are superficial.
- The inefficiency of the curriculum is probably the cause for withdrawal.

The consequences of this withdrawal are serious.
- The curriculum is judged wanting.
- *Withdrawal by the pupil* becomes virtually *elimination by the school.*
- A reconstruction of the curriculum is needed.

CHAPTER THREE

The Traditional Curriculum

Criticism by Pupils

INTERPRETATION OF WITHDRAWAL FROM SCHOOL

Relation to attendance. Withdrawal from school is considered here as a totally different problem from that of attendance, which is a matter of minor importance in school management. Withdrawal, however, is a definite expression of the attitude of both children and adults, and is of a permanent character. Nevertheless, regular attendance in the public school has received, perhaps, more attention than the real work for which attendance is required. It can be watched and recorded easily; therefore it is used as a basis for estimating the general standing of schools, and it enters into standards on the basis of which pupils are promoted. Withdrawal is a much more serious problem and is attended with more divergent consequences.

Two possible interpretations of withdrawal are here suggested.

Withdrawal an index of sufficiency. An illustration may be risked where it may not be needed. A deer comes out of the dense forest to the stream of water. He drinks his fill and then slowly turns and goes back into the forest. He drank until he had enough. There is, of course, the simple implication that the water was satisfying. The quantity varies with the need.

Withdrawal from school may mean just this: an individual pupil has received sufficient schooling to satisfy him. The amount of schooling will depend upon real or supposed needs. In this case, that which is sufficient must be judged according to a much broader standard than the mere caprice

of the individual. Who judges this? Society makes its demands. Social, industrial, and religious life have much influence on the degree to which an individual prepares himself. The community passes judgment. The individual, sooner or later, is bound to recognize this.

An important question at this point is: To what extent do we wish the rank and file of our young people to continue in school? How much is really sufficient? The famous law of 1647 in Massachusetts requiring towns of fifty householders to maintain a teacher went as far as conditions then warranted. Today our free elementary school with compulsory attendance laws makes a higher demand. The public high school and the free state university are further expressions of the people at large against withdrawal from school. All this is in general an assertion of the belief that success is dependent upon preparation through the school. Some studies have given evidence of a correlation between the amount of schooling and financial success.[1]

But even if more time in school means greater success in life, a question may be raised as to the advisability of educating *all* people to the extent of the elementary school. Perhaps the school might well serve as a selective agency, not in discovering those pupils whose intellectual powers warrant continuance into more advanced schools, but in selecting those equal to becoming leaders in community life. Perhaps the school might sift out those who, under quite a different scheme of school occupation, would develop into especially efficient workmen.

In any of these cases, or similar ones, withdrawal may be an index of sufficiency of that which is offered, whatever be the desire for other work not now included in the schools.

Withdrawal an index of efficiency. The deer illustration may be used again. The deer soon finds the water dirty or

[1] Staples, O. B., *Elementary School Teacher*, Vol. 10, pages 261–269.

disturbed by an enemy near and he quickly withdraws. Something is not satisfying. And we may do no injustice to the school situation if we interpret the withdrawal of pupils as an indication that the work of the school does not meet their needs. Who determines these needs? The state says that children shall attend school about six years. Just what shall be done in those six years is not stipulated. Society, through custom, says: Master the Three R's so far as possible in the six or eight years in the grades; let those who would be leaders accomplish more. The withdrawal of the masses of pupils as soon as the law allows may indicate society's judgment that the amount then acquired is sufficient. And it may indicate that society is not satisfied with what is being done and decides that withdrawal is preferable to continuing at school. But the individual, probably more than society, determines by his own interests the extent to which the traditional schooling is of value to him. His decision rests largely upon what he sees of immediate value to him. He fails to find present values in the usual school subjects and expresses his idea by withdrawing.

Thus withdrawal *may* mean that pupils have had a sufficiency, assuming that the work of the school is satisfactory. On the other hand, it *may* mean that the work is not satisfactory and this feeling is expressed by withdrawal.

THE SITUATION AS TO WITHDRAWALS

Studies of withdrawals. Casual observation leads one to suspect that many children are out of school when they should be in school. The Annual Reports of the United States Commissioner of Education show that only 3.75 per cent of all students enrolled in 1893 were in schools above the eighth grade. In 1916 this percentage had increased to 8.59.

Thorndike, Ayres, Strayer, Dearborn, and many others have presented statistical studies of the withdrawal of pupils.

Some generalizations upon the basis of these studies. Only about one tenth of all those enrolled in public schools are in schools above the grade schools. That is, the masses of those in school are in the lower schools. Perhaps the real surprise here is the large number, relatively, that have advanced so far as the secondary schools. Whether this number is gratifying or not depends on the extent of acceptance by individuals and community of the policy of retaining a large number in schools.

State laws requiring attendance at school are such that a respectable attendance is maintained, though from the point of view of compliance with the law there is unquestionably much evasion. Most school attendance laws require attendance up to the age of 14, yet the actual number of pupils withdrawing before the age of 12 is surprisingly large.

Child labor laws vary in the different states. These laws affect school attendance. In general they forbid the employment of children under 14 in factory or shop work. Evidently many evade the law. Further, the laws make certain restrictions upon employing children between 14 and 16 years of age. Data indicate quite extensive withdrawals between the ages of 14 and 16, and there is evidence that many of these withdrawals are for the purpose of going to work. Labor organizations are much opposed to the employment of children before the age of 16, for economic reasons; and child-welfare organizations are likewise opposed for humanitarian reasons. But in spite of such opposition, from one third to one half of the pupils of 14 and 15 years of age leave school.

Whatever may be the value of the course of study taken by pupils in the elementary schools, statistics show that

our pupils complete comparatively little of the work. One fifth of the children entering school complete only four grades. Then in the fifth, sixth, and seventh grades they drop out so rapidly that only about one in three of those who began complete the course. Children may comply with the law requiring attendance at school. The law does not — it cannot — require the completion of certain grades of work.

Approximately one third of pupils in school are behind their grades. Putting together the data on retardation, grade withdrawals, and age withdrawals, there is evidence that there is considerable relationship between retardation and withdrawals.

There has been too little study of the relation between the quality of work and the amount of withdrawal to warrant any very positive conclusion. Brooks'[1] study indicates that there may not be much relation. *If* retardation is a mark of inferiority in mental ability, it seems probable that there is a high correlation. But we shall question again later if those retarded are really mentally inferior.

CAUSES FOR WITHDRAWAL

Withdrawal and school efficiency. At the opening of this chapter it was suggested that withdrawal might be viewed as an index of sufficiency to the pupil or as a measure of the efficiency of the school. Comparatively little evidence seems needed, however, to lead us to set aside the notion that those children who withdraw from school before they have completed five years of school work, or who are two or more years younger than is favored for entering various industries as employees, have had sufficient schooling.

The study referred to on page 40 showing certain posi-

[1] *Educational Review*, Vol. 26, pages 362–393.

tive correlation between advancement in school and financial success, indicates that it is better to remain in school than to withdraw.

Though such evidences of the need of more schooling may be complimentary to our present educational system, there is at least the possibility of finding that our elementary education should contribute much more than it does to success. The large number of withdrawals and the restlessness of pupils under a law that forbids withdrawing present a situation not so complimentary. An examination of the causes of withdrawal will probably lead us to see the efficiency of the school measured by this exodus of pupils from school into the vocational activities of adult life.

Some studies in the causes of withdrawal. A brief résumé of some of the studies of the causes of withdrawal is appropriate here.

TABLE I[1]

CAUSES OF WITHDRAWAL EXPRESSED IN PERCENTAGES

CAUSES	BOYS			GIRLS		
	Grades	High School	Total	Grades	High School	Total
1. Ill health	9	5	8	36	38	37
2. To work	51	37	46	32	17	26
3. Desire for activity	4	9	5	0	0	0
4. Indifference	9	12	10	11	14	12
5. Home influence	8	1	6	6	1	4
6. Failure in work	6	11	7	7	13	9
7. Truancy	3	4	4	1	0	1
8. Bad conduct	4	2	3	1	1	1
9. To attend other schools	2	4	3	4	7	5
10. Dislike for authority	2	11	5	1	4	3
11. Bad habits	2	3	2	0	0	0
12. Society	0	1	1	1	5	2

[1] Brooks, S. D., in *Educational Review*, Vol. 26, page 363.

Ayres presents a study [1] of withdrawals from school in six cities, in which the causes are summarized as follows:

TABLE II

CAUSES OF WITHDRAWAL EXPRESSED IN PERCENTAGES

CAUSES	PERCENTAGES	
	High School	Elementary
1. Work	34.5	20.8
2. Ill health	22.2	16.6
3. Removal	15.3	51.4
4. Private schools	4.6	3.8
5. Lack of success	5.1	—
6. Other reasons	17.2	7.4

Ayres further studies [2] certain fifth- and eighth-grade pupils in New York City, indicating that age is the controlling factor in elimination.

TABLE III

AGE AS A CAUSE OF WITHDRAWAL

AGE AT STARTING	NUMBER OF PUPILS		AVERAGE NUMBER OF YEARS TO COMPLETE		AVERAGE AGE AT COMPLETION	
	Fifth	Eighth	Fifth	Eighth	Fifth	Eighth
Under 5	27	12	7.05	9.62	12.05	14.62
5 to 6	248	64	6.08	8.86	11.58	14.36
6 to 7	410	113	5.92	8.61	12.42	15.11
7 to 8	173	54	5.75	8.44	13.25	15.94
8 to 9	72	19	5.19	8.18	13.69	16.68
9 to 10	32	7	4.85	7.71	14.35	16.71
10 to 11	4		3.50		13.50	
11 to 12	1		3.50		14.50	
Total	967	269	5.86	8.61	12.51	15.23

[1] Ayres, L. P., *Laggards in Our Schools*, pages 99–102.
[2] *Ibid.*, pages 166, 168.

In a study of *Conditions under which children leave school to go to work* [1] prepared by the United States Commissioner of Labor, the following summary of causes for children leaving school is presented:

	Per Cent
Necessity	30.0
Earnings necessary to family support	
Help needed at home	
Self-support necessary	
Child's help desired, though not necessary	27.9
In family support	
To buy property	
In home work	
To earn money for education of self or relative	
Child's dissatisfaction with school	26.6
Tired of school	
Disliked school (general manner of life there)	
Disliked teacher	
Disliked study	
Could not learn	
Not promoted	
Too big for class	
Child's preference for work	9.8
Work preferred to school	
Spending money wanted	
Association desired with friends who worked	
Other causes	5.7
Ill health	
To be kept off the street	
To learn a trade or business	
To avoid vaccination	
Removal of residence	
Mother's disapproval of coeducation	
"Too much play." Company pressure	

J. M. Greenwood [2] discussed retardation of pupils and noted the following causes for retardation among 711 pupils who took more than seven years to complete the seven-year course in the grade schools of Kansas City:

[1] Report on Condition of Woman and Child Wage Earners in the United States. Commissioner of Labor, 1910, Vol. 7, page 46.

[2] *Educational Review*, Vol. 37, pages 342–348.

		Per Cent
Sickness	268	37.7
Changing schools	193	27.1
Reviewing school work	143	20.1
Absence	40	5.6
Having to work	12	1.7
Lack of interest in studies	15	2.1
Weak eyes	3	.4
Defective speech	2	.3
No reason assigned	35	4.9
	711	

The curriculum as the cause for withdrawal. The studies cited above are only a few of many similar ones made in an effort to understand the withdrawal of pupils. An effort is here made to classify these various causes as given and then view them all in the light of what may prove to be a more fundamental cause for the exodus of pupils.

Outside of School	School Management	Individual Pupil
1. *Removal*	1. *The Teacher*	1. *Physical*
1. Out of town	1. Personality	1. Over age
2. Change of district	2. Authority	2. Defective
3. Other kind of school	3. Method of teaching	3. Ill health
2. *Social Conditions*	2. *Regulations*	2. *Intellectual*
1. Home indifference	1. Restrictions	1. Weak
2. Society	2. Classification	2. Failure
3. Community custom	3. Promotions	3. Indifference
4. Need to work	4. Routine of work	
3. *Legal*	3. *Progress*	3. *Character*
1. Compulsory age limit	1. Irregular attendance	1. Bad habits
	2. Retardation	2. Evil conduct
	3. Lack of differentiation	3. Truancy
		4. *Interests*
		1. Desire for activity
		2. Desire for work

These causes, given by pupils, teachers, parents, labor organizations, and educational investigators, are quite miscellaneous. It may not be possible or desirable to reduce

them to one. But the attempt is here made for the purpose of more seriously questioning the situation as to the traditional curriculum.

School teachers and administrators rather easily avoid the responsibility for withdrawal by attributing it to community custom, to indifference, and to retardation. The blame is thus thrown upon parent or pupil. In that case large withdrawals have no effect upon the school teacher and student of education to prompt him to study the situation more seriously. But just this influence is needed. No apology need be made for the position here taken that those responsible for the direction of the school are too frequently satisfied with their work and too indisposed to hold themselves responsible for bettering conditions. If the real cause for withdrawal is found in the curriculum itself, the school authorities, not pupils or parents, must be held responsible for the exodus of pupils.

Therefore the various causes assigned should be examined with reference to the curriculum. It may seem scarcely warranted to look to the nature of the curriculum for explanation of the custom of any community in keeping pupils in school throughout the elementary grades or withdrawing them early. But it is probable that the custom of a community in this respect is considerably influenced by the work done in a school.[1] Just this may be expected: a community will develop a habit of sending children to school if in that school work is done which appeals strongly to the patrons as valuable. Ayres gives [2] the percentage of pupils retained to the fourth year of the high school in each of fifty-one cities. A portion of these data is sufficient to illustrate the difference in the customs of the communities.

[1] For an account of "How a School Built a Town" see Page, W. H., *The Rebuilding of Old Commonwealths.*

[2] Ayres, L. P., *Laggards in Our Schools,* page 64.

	City	Per Cent
1.	Newton, Mass.	38
2.	Waltham, Mass.	29
3.	Aurora, Ill.	25
4.	Newark, Ohio	25
21.	Omaha, Neb.	13
22.	Newport, R. I.	12
23.	Grand Rapids, Mich.	11
24.	Springfield, Mass.	11
48.	Newark, N. J.	3
49.	New York, N. Y.	3
50.	Philadelphia, Pa.	3
51.	Wheeling, W. Va.	3

Social and industrial conditions in these various places contribute somewhat to the retention of pupils. School management shares the influence. It may be claimed that the actual difference between the curriculum in Newton and that in Wheeling is not so great as between the percentages of pupils retained to the fourth year of high school, 38 and 3, respectively. But the *value* of that school work to those communities is probably proportional to the retention of pupils.

Retardation as an assigned cause is probably largely due to the failure of school officials to provide that kind of schoolroom occupation which is suited to certain types of boys and girls. Those pupils designated as retarded do rank low when tested by the particular types of intellectual work called for in the traditional school. Some mental tests of another nature might compel us to question if the retarded pupils might not be the accelerated ones in a curriculum made to fit their needs.

In a similar way, one may criticize all these assigned causes for withdrawal. Lack of differentiation is due to a curriculum so stereotyped that little opportunity is left for individual variation. Indifference is readily explained on the basis of the curriculum not being constructed accord-

ing to tastes and abilities of pupils. Desire for activity is readily understood when one notes the extent to which the traditional curriculum is one of passively learning rather than one of actively doing.

There is no intention to suggest here that these assigned causes should be disregarded. They may be accepted as the immediate causes for withdrawal. But professional sincerity invites the student of education to investigate more carefully to find that cause for which he can hold himself largely responsible. This cause is the curriculum as an expression of the work of the school.[1]

CONSEQUENCES OF THIS WITHDRAWAL

Inefficiency of the traditional curriculum. One of the consequences of withdrawal is a verdict by the pupils that the work does not meet their needs. Withdrawal becomes an index of inefficiency of the school work. The curriculum is judged wanting.

Withdrawal becomes elimination. The discussion of this chapter was opened with the term "withdrawal." This term and "elimination" have been used throughout the chapter as practically synonymous. But the chapter must close with a substitution of "elimination" for "withdrawal." Evidence seems to be conclusive that pupils do not *withdraw* as though by their own choice. They are *eliminated* from school by the conditions imposed upon them. The law requires attendance, but leaves to school authorities the provision for school occupation. School teachers do their best by methods, devices, and motivation to make the work congenial to the pupils. In spite of these efforts, the traditional school eliminates the many who are not constructed on this Procrustean plan.

[1] Compare Dewey, *School and Society*, 1915 edition, pages 24–28.

Curriculum needs reconstruction. The situation presented above is not new. Many efforts have been made to revise the old curriculum to meet new conditions; methods, devices, and motivation have been introduced. Nevertheless, changes do not keep pace with the advance in needs and demands. The situation calls for a curriculum so constructed that changes in social and industrial conditions shall determine the nature and extent of changes in the curriculum itself.

Supplementary Readings

AYRES, L. P. *Laggards in Our Schools*, pages 8–18, 49–72, 99–116, 159–169.

BLAN, L. B. *A Special Study of the Incidence of Retardation.*

BROOKS, S. D. "Causes of Withdrawal from School." *Educational Review*, Vol. 26, pages 362–393.

DEARBORN, W. F. "Qualitative Elimination from School." *Elementary School Teacher*, 1909, Vol. 10, pages 1–13.

—— "The Relative Standing of Pupils in the High School and the University." Bulletin of the University of Wisconsin, 1909.

MAJOR, J. W. *The Withdrawal of Pupils from School.* Master's Thesis, University of Missouri, 1906.

Report: *When and Why Children Fail.* New York Bureau of Municipal Research, 1911.

—— *Conditions under Which Children Leave School.* United States Bureau of Labor, 1910, Vol. 7.

STAPLES, O. B. "Schooling and Financial Success." *Elementary School Teacher*, 1910, Vol. 10, pages 261–269.

STRAYER, G. D., and THORNDIKE, E. L. *Educational Administration*, pages 3–53.

THORNDIKE, E. L. *The Elimination of Pupils from School.* Bureau of Education Bulletin, No. 4, 1907.

WOODWARD, C. M. *Age of Withdrawal from Public Schools.* Report, Commissioner of Education, 1894–1895, pages 1161–1170.

—— *When and Why Pupils Leave School.* Report, Commissioner of Education, 1899–1900, pages 1364–1374.

Statement Outline for Chapter Four

Criticism of school work is inevitable.
- No generally accepted standard for school values has been devised.
- Criticisms are passed by all classes of people.
- The reliability of any criticism depends upon the rating of the critic by the community.
- The spirit of criticism should be constructive.

A survey of current criticism shows much weakness in the schools.
- School surveys indicate that school work is inadequately connected with the life of the community.
- Researches in school subjects show them less valuable than commonly supposed.
- Educational movements, such as the junior high school, industrial education, etc., strongly imply lack of efficiency in the traditional schools.
- Representative educators are expressing some well-merited criticism of our schools.
- Laymen and popular school gossip add to the adverse criticism.

The traditional curriculum may be characterized as:
- Aimless; it does not function in the lives of pupils.
- Lifeless; mere form subjects predominate.
- Disconnected; fourteen school subjects are treated as unrelated except when arbitrarily and superficially correlated as schoolroom arts.
- Congested; the crowded situation is due to the treatment of empty details.
- Wasteful; "progress through the grades" consists of "marking time" and "busy work."
- Untimely; the traditional curriculum is not apace with the vital issues of the day.

CHAPTER FOUR

The Traditional Curriculum

Criticism by Adults

SOURCES OF CRITICISM

Criterion of judgment. As yet we have no generally accepted standard by which we may judge the value of the curriculum used in our schools.[1] Much study is being directed to the arrangement of tests, by which the pupils' work in the various school subjects is measured. These tests, which are rapidly changing, may lead, by the trial-and-error method, to an acceptable standard of judgment. As will be discussed in later chapters, it is greatly to be feared that these tests aim to measure the content of specific school subjects rather than the effect that these studies have upon the behavior of people in society. But there are some indications of a tendency to judge school work in terms of conduct outside of school. In so far as we regard the school curriculum as a real means of aiding in our adjustments in real life, just so far will we aim to test school work in terms of life activities. At present, there seems to be no satisfactory formulation of such a standard. However, there is a body of criticisms which merits attention.

Sources of criticism. Criticisms are made by those who are dissatisfied and by those who have a professional and constructive interest in the service of the school. The dissatisfied are usually those who are parents or patrons and express themselves orally in school gossip. This causes some local disturbance and unpleasantness. Such criticism is often ill-founded and misdirected. It is, however, an expression of the reaction of the people upon the work of

[1] Compare McMurry, F. M., *Elementary School Standards.*

the school and should not be disregarded; but such criticism cannot be discussed here.

The sources of criticism to be considered here are: school surveys; special studies made by students of education; certain educational movements; opinions of educators; the attitude of the laborer and layman; and current comment in periodicals. These will be surveyed very briefly.

Reliability of criticisms. Without an accepted standard, the validity or strength of criticisms is dependent upon the critics' standing in the community. Up to date our school surveys are largely the findings and opinions of men and women who have won through their educational work a large measure of public confidence. Scientific studies which might be verified by others are only in their initial stages, but the public attaches much significance to their tentative conclusions. Even the layman is winning consideration for his criticisms, especially in a democratic government where every man participates in the control of public institutions.

The spirit of criticism. Conscientious criticism is not mere faultfinding, though unfortunately a few people are in the habit of complaining without offering any remedial suggestions. Fortunately these are the exception. Criticism, from whatever source, should be gratefully received in so far as it contains suggestions for improvement. Any other criticism should be disregarded. Only by this attitude toward criticism can real profit result from the studies and opinions of others.

SURVEY OF CRITICISMS

School surveys. Scores of school surveys have been made with the purpose of checking up the work of the schools and making such criticisms as may lead to greater efficiency. The large number of such surveys already conducted indicates the value assigned to them. Space forbids a complete

summary of the criticisms made in those surveys. Only a few representative criticisms will be cited.

School work is inadequately connected with the life of the community. This criticism is apparently the most common one in these surveys. Indeed this criticism is stated or strongly implied in nearly every report. In their report upon the survey of the schools at Butte, Montana,[1] Professors Strayer, Bachman, and Cubberley call attention to the new conception of education in these words: "... the point of emphasis ... has been shifted from mere information and drill to the needs of the child as an individual. ... the purpose in education has come to be, more and more, to prepare children for intelligent participation in the social, domestic, economic, and political life of the future, of which they will soon form a part." They then criticize adversely the curriculum by saying: "The courses of study provided for Butte's children represent essentially an earlier conception of education, where drill on the mere fundamentals of knowledge was conceived to be the essential purpose of public education. ... this newer conception of the purpose of education has as yet been but dimly conceived by either teachers or school officers here." The foregoing criticism is representative of those made upon other city schools. In the *Rural Survey in Maryland*[2] is the characteristic conclusion: "... the curriculum of the rural school contains very little that distinctly prepares for country life. ... A readjustment is desirable so that the studies pursued would be more closely correlated with the life and interests of the community."

This one sweeping criticism may readily include others. In his part of the survey of the schools of New York City, McMurry emphasizes the lack of motivation as that which

[1] *Survey of the School System of Butte* (1913–1914), page 49.
[2] *Rural Survey in Maryland*, 1911–1912, pages 75, 108.

forbids effective school work. This absence of purpose is due to the gross formality of the work and the fact that it does not touch the real life of the pupil. This lack of motivation as an adverse criticism appears in many of these school surveys.

"In Vermont as elsewhere there are many complaints that pupils who have completed the school course are unable to do satisfactory work in positions requiring the use of arithmetic and English. This criticism is often turned against those who were most satisfactory as pupils. The difficulty is not that these subjects did not receive enough time in school, but rather that the processes were merely memorized and the memory kept alive by frequent drills. The children never saw that these processes had any practical application, consequently the knowledge was not so organized that it became a part of the child's experience. The remedy is to be found in such an organization of the subject matter that children can use it." [1] This criticism that the fundamentals are not mastered applies also to the whole content of the course of study. Not more drill is needed but more study of those phases of life in which these fundamentals naturally function.

These surveys clearly indicate that the problem of the school is much more than mere *method* of class work. Most of these surveys are social studies — examinations into the service of the school in the community.

Researches in school subjects. Various studies have been made — and are being continued — essentially with an inquiry as to the effectiveness of subject matter and method in the different school subjects. None of these investigations has been carried so far as to endanger seriously the position of the present subjects in the schedule of school

[1] Hillegas, M. B., *Education in Vermont.* Carnegie Foundation for the Advancement of Teaching, Bulletin No. 7, 1914, page 47.

work. Nevertheless, the investigations seem to reflect upon the content of the work in the traditional subjects.

Arithmetic. In 1902 Rice [1] conducted extensive tests, guided by two questions: (1) What results are accomplished? (2) How much time is used in the work? In his examination of errors in the pupils' work, he concluded that the vast majority were due to a complete absence of effective thought on the part of the pupils. Stone [2] inquired as to two aspects of work in arithmetic: the fundamentals or the more formal operations, and reasoning. He concluded that the correlation between reasoning and the better courses of study is high; that those who have been most interested in improving courses of study have been most concerned with improvements along the line of concreteness or intrinsic worth of subject matter. In his study of the arithmetical abilities of pupils in New York City, Courtis concluded: "The average child in New York City will be able to do abstract work rapidly but inaccurately; simple reasoning work, slowly." In advising changes, Courtis recommended that "a study be made of the social life of all types of children to determine the material available for problem work." [3] Suzzallo [4] surveys the general tendency in the current practices of teaching arithmetic and calls attention to the decided shift in emphasis from academic to social aims, which has the effect of substituting social utility for the formal training of the traditional course.

Spelling. Rice opened the inquiry here by a study and report upon "The Futility of the Spelling Grind." [5] He was led to propose a more restricted and more carefully selected

[1] Rice, J. M., *Scientific Management in Education*, pages 100–179.
[2] Stone, C. W., *Arithmetical Abilities.*
[3] Courtis, S. A., New York Reports (1912), *Courtis Tests in Arithmetic*, pages 153, 155.
[4] Suzzallo, H., *The Teaching of Primary Arithmetic.*
[5] First printed in the *Forum* for April, 1897.

vocabulary. Cook and O'Shea [1] examined considerable correspondence and tabulated the words used:

186 words used by all correspondents
577 words used by a majority of the correspondents
2207 words used by less than a majority of the correspondents
2230 words used by one writer only

The authors concluded that "everyday needs are not consulted in the framing of spelling lists but that the dogma of formal discipline . . . and the domination of common schools by higher institutions have been the forces at work." The Division of Education in the Russell Sage Foundation conducted studies to discover the thousand words most commonly used in writing. This limitation clearly suggests a weakness in the wide range of words so usually studied in the traditional school, and suggests a vocabulary more in tune with everyday use. In his study of the measurement of efficiency in spelling, Starch [2] is not especially concerned with the vocabulary selected, but his conclusion may easily reflect upon the traditional organization, in which so much confidence is shown in arranging words to suit the abilities of pupils in the grades. "The highest one third of the pupils in any given grade on the average are equal in efficiency to the pupils in the grade next above it, and the lowest one third are equal in efficiency to the pupils of the next grade below it. This leaves only the middle one third of pupils who are properly placed." This means that the vocabulary actually used is not adapted to the abilities of the majority of the grade and thus is not suited to the real needs. The investigation of Cornman [3] led him to advise that spelling be taught, not as a special subject, but only incidentally. One of Suzzallo's generalizations [4] is that

[1] Cook, W. A., and O'Shea, M. V., *The Child and His Spelling.*
[2] *Journal of Educational Psychology,* Vol. 6, pages 167–186.
[3] Cornman, O. P., *Spelling in the Elementary School.*
[4] Suzzallo, H., *The Teaching of Spelling.*

there is a marked tendency to teach no spelling until the pupils have a real need for such in written composition, and that there is an increased dependence upon incidental acquisition of spelling. This means a decided change in the curriculum in spelling.

Grammar. In 1906 Hoyt inquired as to the place of grammar in the elementary school. His investigations led him to conclude: " . . . the subject as generally taught is not of sufficient value to deserve the place it commonly occupies in the elementary curriculum." [1] Rapeer [2] carried this study further and with other data verified Hoyt's conclusion of seven years earlier. Briggs also supplemented Hoyt's study with special reference to formal discipline, which has been so highly valued by those who adhere to the study of grammar. Briggs concluded, " . . . these particular children . . . do not, as measured by the means employed, show in any of the abilities tested improvement that may be attributed to their training in formal grammar." [3] A more direct thrust at the subject of grammar was recently made by Charters.[4] He showed that most of the errors made by school pupils are within a very narrow range, and that the content of grammar might be considerably reduced if the purpose is to correct the common errors of children. A similar study with similar conclusions was made at the same time by Superintendent Thompson of Waukegan, Illinois.

Other school subjects. Similar investigations are in progress in other school subjects. Thorndike,[5] Starch,[6] and Kelley [7] have begun investigations in reading in the elementary

[1] *Teachers College Record*, Vol. 7, No. 5, page 22, 1906.
[2] *Journal of Educational Psychology*, Vol. 4, pages 125–137, 1913.
[3] *Teachers College Record*, Vol. 14, No. 4, page 92, 1913.
[4] Bulletin, University of Missouri, Educational Series, No. 9.
[5] *Teachers College Record*, Vol. 16, No. 5, 1915, Vol. 17, No. 1, 1916.
[6] *Journal of Educational Psychology*, Vol. 6, pages 1–24, 1915.
[7] Bulletin, University of Kansas, Studies by the Bureau of Educational Measurements and Standards, No. 3, 1915.

schools. Results obtained from reading tests, in which rapidity and the amount remembered were the predominant factors, cast no reflection on the content of the traditional reading course. At present the tests are concerned principally with the mechanics of reading. Not until investigators begin to consider the appreciation of literature read, will they be likely to question the procedure and formalities of the traditional reading course.

Dunn [1] has opened the question of a possible improvement upon civil government and history as usually given. His study shows a marked tendency, in various schools in the country, to substitute a study of current problems in social, industrial, and political life for the usual formal work in these social studies.

Educational movements. Educational movements are of a constructive nature. In them, however, adverse criticism upon traditional practice is directly expressed or only implied. (1) The junior high school movement seems to be a definite criticism of the work of the seventh, eighth, and ninth grades of the traditional school. The advocates of this new school organization complain that in these three grades there is a great waste of time, largely due to the lack of new material offered in the advanced grades. In other words, the curriculum of the upper grades is without content. In theory at least, it is claimed that this junior high school supplies industrial studies and real motivation, both of which are wanting in the curriculum of the old school. (2) A similar movement is seen in the rapidly increasing emphasis upon vocational and industrial education. National legislation has greatly assisted in this, as seen in the Smith-Hughes Act (1917) and the Smith-Lever Act (1914). Various states have promptly reacted by legislation to co-

[1] Dunn, A. W., *The Social Studies in Secondary Schools.*, Bureau of Education, Bulletin No. 28, 1916.

operate with the national government. This movement virtually stamps the traditional school as not providing an education and a training of a sufficiently practical sort. School work in touch with real life is called for. (3) Closely allied to this is the movement to grant school credit for home work.[1] In this provision for supplementing the work of the school this criticism is implied: school work of today lacks just that relation to store, shop, factory, and home now so urgently demanded. (4) There has also been a general movement to simplify the course of study in the elementary school. "Much effort has been spent in simplifying the course of study. In arithmetic, for example, there is an attempt to eliminate obsolete subject matter. In language study stress is placed upon speaking and writing with clearness, rather than upon the mere mechanics of composition. Hygienic living is emphasized and not the memorizing of anatomical terms, while courses in geography dwell upon the fact that the study of the earth is not a study of the location of capes, etc., but a study of the work of the world. In brief, courses of study show much improvement in the arrangement and in the selection of material, though many schools in the small towns and cities still adhere to old-time courses, teaching subject matter that never had and never will have any direct bearing on life, especially on child life."[2] (5) The wider use of the school plant has received much emphasis in recent years. The criticism upon the curriculum is only indirect as yet, but the indications are that this movement heralds a considerable change in the work of the school itself. The wider use of the school plant is already linking the school more closely to the life of the community. This is a long step toward overcoming the isolation of the school from the home and community.

[1] Alderman, L. R., *School Credit for Home Work.*
[2] Report of the Commissioner of Education, 1915, Vol. 1, page 59.

This movement is naturally a reaction upon the use of the conventional curriculum.

Representative opinions of educators. It would be absolutely impossible to give a complete summary of the criticisms that educational men have made upon the traditional curriculum. Only an indication can be given of the great number of criticisms being made by such leaders. Professor Dewey [1] has pointed out the serious conflict between new social needs and the traditional means of preparing to meet those needs. And in such a conflict there can be no question which side must yield. The case of the child and of society demands a reconstruction of the school work. Professor Hanus has complained that the schools have attended to "culture" of a formal sort, but have not attended to the problems of real living. The schools "have been afraid of 'utilitarian' aims, and, sometimes, by a curiously inadequate conception of their real function they have even measured their own usefulness by the extent to which they have kept the distinctly useful out of their work." [2] Professor McMurry applied his four "standards" to the curriculum used in the schools of New York City and concluded: "(1) The courses are, in general, baldly abstract; and, if they appeal to young people, it is due rather to accident than to any skillful provision for motive on the part of those who selected their subject matter. . . . (2) Many topics that have little worth are included and many others that are a very source of life are omitted. (3). . . the underlying principles, or unifying ideas of these subjects being largely omitted they fall into detached facts, having the minimum amount of organization. (4) . . . so far as the individuality of children is concerned, the curriculum and

[1] For the most concise statement of his views see his three monographs, *The Educational Situation, The Child and the Curriculum,* and *School and Society.*

[2] Hanus, P. H., *The Beginnings of Industrial Education,* page 4.

syllabi not only make no provision for preserving and developing it, but . . . their influence tends somewhat in the opposite direction." [1] Abraham Flexner, Secretary of the General Education Board, in proposing a general policy for "A Modern School," [2] criticizes the traditional school in these terms: "Generally speaking, it may be safely affirmed that the subjects commonly taught, the time at which they are taught, the manner in which they are taught, and the amounts taught are determined by tradition, not by a fresh and untrammeled consideration of living and present needs."

Draper pointedly commented upon our school work: "The public school system has had but little thought of craftsmanship, by which the greater part of the people must live, and upon which the moral and intellectual health of the people and the greatness of the nation must depend; the work of the schools has led almost exclusively to mere culture and to professional and managing employments. . . ." [3]

Edmond Holmes, an English educator, may be cited as another representative critic. Mr. Holmes, once an inspector of schools in England, severely censures the conduct of elementary education. He contrasts "the path of mechanical obedience" in the conventional school with "the path of self-realization" in the school that meets present needs. "The education given in thousands of our elementary schools is, then, in the highest degree anti-educational." [4]

Munroe sharply criticizes the traditional school: "Custom expects a high school to meet the unreal demands of the college, but does not expect it to prepare for the real and pressing requirements of daily life." Strictly in line with

[1] *Report on School Inquiry*, pages 111–114.
[2] Monograph published by the General Education Board, 1916.
[3] Draper, A. S., *Our Children, Our Schools, and Our Industries*, page 55.
[4] Holmes, E., *What Is and What Might Be*, page 144.

this the common school treats all individuals with the same uniform course. "A uniform course is the very embodiment of inequality, making the weak weaker, the dull duller, the cross-grained more out of touch with the rest of mankind." [1] A report of the committee of the National Education Association [2] on economy of time in education listed reasons for waste of time. Four of the nine given are: "Covering unimportant and unpractical topics"; "Needless multiplication of the subjects taught"; "Hopelessly expending energies upon non-essentials"; "Routine practice, odds and ends, 'fads and frills' generally."

Testimony from laymen. Non-schoolmen have their impressions of the schools and express them. Considerable credit must be given laymen for their educational thoughts, which have been developed by our democratic government. The supervisor of apprenticeship schools of the Santa Fé Railway System complains that the public schools fail to develop in the pupils ability in spelling, writing, and arithmetic; that more attention is given to "culture" than to insight into social and industrial conditions and to training in attitude toward work.[3] Labor organizations, as well as individual laborers who give the school any attention, are not satisfied with the training given the prospective laborer while in the elementary schools.[4] Samuel Gompers, President of the American Federation of Labor, is quoted as saying: "The old cultural ideals of education, dealing with the abstract only, denied to the great majority of children an education adapted to their minds and natures, and hence failed to fit them for the duties and possibilities

[1] Munroe, J. P., *New Demands in Education*, pages 4, 37–38.

[2] National Education Association, 1909, page 374.

[3] Article by F. W. Thomas in National Education Association, 1914, pages 177–184.

[4] Consult: Report, New York State Department of Labor, for 1908; Report, Vocational Survey of Minneapolis, 1913; Report, Vocational Education Survey of Richmond, 1916.

of the work of life." [1] The superintendent of schools at Solvay, New York, once asked twelve firms, representing employments into which pupils leaving the Solvay schools would probably go, what fractions were used in their industries. The answers included only the following: $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{1}{6}$, $\frac{1}{8}$, $\frac{1}{10}$, $\frac{1}{12}$, $\frac{1}{15}$, $\frac{1}{16}$, $\frac{1}{24}$, $\frac{1}{25}$, $\frac{1}{36}$, $\frac{1}{64}$. [2] This is, of course, only an implied criticism upon the school arithmetic. "The schools do so little really to interest the child in the life of production," says Jane Addams.[3] Forbush comments upon a report that of 666 pupils who withdrew from school 580 claimed they had left because of poverty. "The actual circumstances were carefully investigated, and it was found out that with 390 of them this was a mere pretext. The actual reason was, the children were bored." [4] This last statement is *probably* only opinion, but as such is representative of opinions of many who are more concerned with children than schools. In literature one frequently meets thrusts at the inefficiency of school work. "Emmy Lou, laboriously copying digits, looked up . . ." [5]

Popular school gossip. The public press and its readers find certain pleasure in school gossip. While much of this must not be relied upon as safe judgment, some of it is very representative of the impression the public schools are making upon the public generally. Keeping an eye upon press reports and comments will lead one to look more critically upon the actual work of the school. This popular school gossip need not present facts; it renders service if it provokes thought on the part of school men. "What good was your schooling?" "Hypocrisy taught in schools — instead of discovering what he likes, the child is told what he ought

[1] Quoted in Report of Commissioner of Education, 1916, Vol. 1, page 162.
[2] Report of Superintendent, 1913–1914.
[3] Addams, Jane, *Democracy and Social Ethics*, page 193.
[4] Forbush, W. B., *The Coming Generation*, page 281.
[5] Martin, G. M., *Emmy Lou*, page 1.

to like"; "Calls schools a jumble"; "Pupils show great ignorance"; "Pupils add sums for the privilege of trips in 'coaches'"; "A new school era dawns — the child to have a chance to grow"; "Poor schools cause crime"; "Vitalizing classroom instruction" — such are the headlines in the current press. They readily suggest the nature of criticisms continually passed.

Extent of criticism. It is impossible to make any adequate résumé of current criticisms of the traditional curriculum. What has been presented above is merely intended to suggest the sources and to represent the nature of criticisms made. If one looks into adverse criticisms for the constructive suggestions they may contain, great profit may result by continuing this sort of investigation.

CHARACTERIZATIONS OF THE CURRICULUM

At the risk of indefiniteness an abstract of the above criticisms — and others not there included — is offered, in the form of characterizations of the traditional curriculum.

Aimless. The seven, eight, or nine years' course in the elementary school seems to be with no more definite purpose than to "prepare for complete living," which is too indefinite to be an effective aim; to occupy the child until he is sufficiently matured to prepare for some station in life or enter an occupation without preparation; to give the child "general discipline," which in earlier times was regarded as suitable preparation for anything.

Lifeless.[1] The traditional school is, in the main, isolated from the real life of the child and the community. McMurry has well said, "The nature of children suggests that the end point of a good education should be action." Contrary to

[1] Compare characterization of curriculum in Portland as "dead." See *Survey of Portland Schools.*

this the curriculum really consists of form studies, and can thus connect with life only when " applications " are made. Usually these are artificial. The traditional curriculum consists of content to be passively learned rather than problems to be actively studied.

Disconnected. Fourteen school subjects are listed by Holmes in his study of the distribution of time [1] in the construction of the school schedule. This number is exclusive of an indefinite group labeled " miscellaneous." Each is essentially a unit in itself. Relation to other subjects is largely a matter of arbitrary correlation, which then becomes artificial and superficial.

Congested. With so many subjects, each seeming to have a right on the program, and with others seeking admission, it is not to be wondered that teachers complain of the work being crowded. It is this number of subjects and their subdivisions that make the total amount of work seem large. This minute division of school work is the cause of a large number of details. Here is the real source of apparent increase of work. The curriculum *is* congested not by the richness of its content but by the number of its empty details.

Wasteful. Any plan of work which is aimless, lifeless, disconnected, and congested must necessarily consume valuable effort of children who are obliged to follow such outlined work. Those acquainted with conditions in the elementary schools are quite in agreement that " progress through the grades " consists of much marking time. Drills and reviews are the " busy work " that occupies the time during which the pupil is developing by other influences or merely marking time until the compulsory attendance law releases him from school.

[1] Fourteenth Year Book of the National Society for the Study of Education.

Untimely. Perhaps the most striking characteristic of the traditional curriculum is that it is untimely. At the very time when home life is said to be in a more unstable condition than it has been since the beginning of the Christian Era,[1] and when social progress issues so many calls for conscious and persistent human effort,[2] at such times how amiss it seems to devote so much attention to a curriculum of the past and of passing formalities, and so little attention to a curriculum of the present and of surpassing opportunities. This is an age of intensely interesting progress. Changes in industrial and social life are taking place rapidly. The curriculum that is not bound up closely with these vital problems of contemporary life is nothing less than untimely.

Supplementary Readings

A Few of the Leading School Surveys

Baltimore, Md., 1911.
Butte, Mont., 1914.
Cincinnati, Ohio, 1915. Industrial Survey.
East Orange, N. J., 1912.
Hammond, Ind., 1915. People, Industries, and Schools.
Indianapolis, Ind., 1917. Vocational Survey.
Lane County, Ore., 1916.
Leavenworth, Kan., 1915.
Maryland, 1912. *Rural.*
Minneapolis, Minn., 1913. Vocational Survey.
Montgomery County, Md., 1913.
New York City, 1912.
Oakland, Cal., 1915.
Ohio, 1914.
Portland, Ore., 1913.
Richmond, Va., 1916. Vocational Survey.
Salt Lake City, Utah, 1915.
South Bend, Ind., 1914.
Springfield, Ill. 1914.

[1] Ellwood, C. A., *Sociology and Modern Social Problems*, page 147.
[2] Todd, A. T., *Theories of Social Progress*, page 148.

St. Louis, Mo., 1917.
Vermont, 1914.
Wisconsin, 1912. Rural Schools.

A Few Investigations in School Subjects

BOBBITT, F. *What the Schools Teach and Might Teach.*
COOK, W. A., and O'SHEA, M. V. *The Child and His Spelling.*
CORNMAN, O. P. *Spelling in the Elementary School.*
COURTIS, S. A. *Measurement of Classroom Products.*
JUDD, C. H. *Measuring the Work of the Public Schools.*
MONROE, W. S., DE VOSS, J. C., and KELLY, F. J. *Educational Tests and Measurements.*
RICE, J. M. *Scientific Management in Education.*
STONE, C. W. *Arithmetical Abilities.*
SUZZALLO, H. *The Teaching of Primary Arithmetic.*
—— *The Teaching of Spelling.*

A Few Opinions of a Few Educators

CARNEY, MABEL. *Country Life and the Country School.*
CUBBERLEY, E. P. *Changing Conceptions of Education.*
DEWEY, J. *School and Society.*
DOOLEY, W. H. *The Education of the Ne'er-Do-Well.*
DRAPER, A. S. *Our Children, Our Schools, and Our Industries.*
FLEXNER, A. *A Modern School.*
HANUS, P. H. *The Beginnings of Industrial Education.*
HOLMES, E. *What Is and What Might Be.*
MCMURRY, F. M. *Elementary School Standards.*
MUNROE, J. P. *New Demands in Education.*

Statement Outline for Chapter Five

The situation as to the curriculum calls for positive treatment.
- The old curriculum is unsatisfactory.
- Shall the old curriculum be changed or shall a new curriculum be made?

The usual means of changing the old curriculum are unsatisfactory.
- Omission is not constructive and is uneconomical.
- Enrichment is only a bit of patchwork.
- Motivation is a temporary and arbitrary expedient.
- The study of "minimum essentials" is limited to the traditional school subjects.
- Introduction of the practical is only a partial improvement.

A more fundamental basis for making curricula is needed.
- Principles for guidance must be sought in social problems.
- The curriculum-maker must recognize certain obligations:
  - He must be unhampered by the traditional curriculum;
  - He must counsel with others;
  - He must frame general principles for local adaptations;
  - He must be loyal to his task.
- There is danger of conflict between old school conditions and new social aims.

The plan for making curricula consists of:
- A survey of social problems;
- A survey of progressive school tendencies;
- The formulation of five principles for an efficient curriculum;
- The outline of four school studies;
- An evaluation of methods and results.

CHAPTER FIVE

The Making of Curricula

THE SITUATION

The old curriculum unsatisfactory. In the preceding chapters an attempt has been made to point out something of the extent to which the curriculum of the traditional school fails to meet the conditions of modern life. Pupils, teachers, and communities show in a variety of ways that they are not satisfied. The curriculum of the past may have met the needs of the past, but we cannot fail to be impressed with the rapid changes taking place in life outside of school. This question naturally arises: What necessary changes shall be made in the school to keep the pace and really serve modern conditions of life? We are ready to modify our school work only to the extent that we are satisfied that the old curriculum does not meet new conditions. How extensive should these changes be? Need they be radical, or will slight changes suffice?

The problem of change. Do curricula grow or should they be definitely made? Growth is by slight but continued change. Most social institutions, as well as biological organisms, develop in this way. The traditional curriculum seems to have been no exception. *Principles Underlying the Making of School Curricula* have been discussed by Professor McMurry.[1] This making of curricula suggests more radical changes than take place in the customary manner of curriculum transformation. The usual means of *changing* curricula will be reviewed briefly, then a plan for *making* curricula will be outlined.

[1] *Teachers College Record*, Vol. 16, No. 4, 1915.

USUAL MEANS OF CHANGING CURRICULA

Omission. It is readily recognized that increase in human experience tends to increase the content of the various school subjects. Texts in arithmetic, geography, language, history, etc., have accumulated content. New subjects have also found their way into the traditional course. All this has been taking place so gradually that the school world was scarcely conscious of the changes. Soon congestion was recognized. Conscious and conscientious efforts were made here and there to relieve the situation. To omit parts of arithmetic or grammar from either the text or the classroom required much courage. But in the past twenty years much has been taken from the congested curriculum. In the face of rapid accessions of subject matter in recent years, omissions have helped regulate and establish the equilibrium of the curriculum. The basis for omission is usually sought in the relation of the subject matter in question to life outside of school. However, it must be admitted that omission is only a negative means of improving the curriculum.[1] There is the implication that *any* subject matter may be admitted. It loses its place as soon as it fails to meet the tests. Such a procedure is not constructive and is uneconomical in the development of curricula.

Enrichment. As subject matter in the old school became more and more formal and thus appealed less and less to the pupils, enrichment was advocated as a remedy. The arithmetics soon contained *problems that seemed more immediately related to life;* language lessons were based upon scientific, historic, and literary subjects; geography included some additional references to the life and activities of men. Enrichment was largely by means of adding subject matter

[1] Compare suggestions made by F. M. McMurry, National Education Association Reports, 1904, pages 194–206; *Teachers College Record*, Vol. 16, No. 4, page 3.

taken directly from the various activities of people or the phenomena of nature. However, such enrichment is clearly not a constructive change in the curriculum. It is used essentially to piece out the old studies where more timely content is needed, and indeed to make the old tolerable.

Motivation. Somewhat allied to enrichment is the plan of motivating the usual work by the introduction of other subject matter related to the topic, a subject matter that appeals strongly to children. This method is used to vitalize uninteresting work. For example, sand-table construction was introduced originally to clarify and objectify, to enrich and motivate stories read and facts presented. As a result of having the sand table, simple studies in the activities of people have been added to the work of the lower grades. In a similar way handwork, first used as a handmaid for other work, has found a place for itself. Other means, similar to motivation, by which subject matter is slightly changed, are seen in efforts to "psychologize," "vitalize," and "socialize" the school work. All of these agencies for improvement are at most only temporary expedients, not fundamental reconstruction. Motivation of school work implies that the work to be motivated is not strictly suitable to the needs, tastes, and abilities of the pupils. To vitalize is to admit that certain subject matter is not a part of real life; it ought therefore to have no admission to the curriculum. So also, no admission should be given to work that needs to be socialized.

Determination of minimum essentials in elementary school subjects. An attempt has been made to modify the content of the elementary school subjects by a careful study of the use of such subject matter in various activities of out-of-school life. For example: the reading of "current literature could be profitably employed as a standard for determining the kind of geographical information that the school should provide.

The proposal was to read current newspapers and magazines, record the geographical references, and determine from the frequency of these references the relative value of the various types of geographical information." [1]

All these studies carry out in a scientific way the problem set: the determination of minimum essentials. But in all these studies there is present the assumption that the Three-R subjects are essentials in the elementary school. But perhaps — and probably — community life contains some important topics for study, not easily pigeonholed in the traditional subjects.

Introduction of the practical. From time to time the curriculum has been changed here and there by the introduction of what may be termed "practical subjects." This change has taken place when those interested have realized that the school was not adequately serving the community. This is at best only a partial improvement, and the school is made practical only in spots.

Unprincipled change. All the changes indicated are but a sort of patchwork. Omissions are made where the curriculum becomes crowded. Enrichment is suggested where the work seems barren. Motivation through the introduction of really vital subject matter is attempted where the usual work does not appeal. The practical is introduced where the course of study seems of little value. By such means and others, our school curriculum has been continually changing. Indeed, continual change is necessary if the school is to serve a rapidly changing and rapidly advancing civilization. But the changes noted are without any fundamental principle: they are spasmodic, personal, temporary, local. In place of such chance adjustments is

[1] Bagley, W. C., *The Fourteenth Year Book of the National Society for the Study of Education* (1915), page 131. See other parts of this year book and also the sixteenth year book, for similar studies.

it not possible to *make* a curriculum of a more permanent character and of universal application? This is the problem undertaken in this volume.

BASIS FOR MAKING CURRICULA

Source of guiding principles. There will be probably little, if any, disagreement in this general proposition: The purpose of the school is to serve society and the individual as a member of society. Were there only one individual — no group of individuals that make up society — it might be well that he educate himself, so as to adjust himself the better to his environment, a very barren environment without other men and their activities. There would be no school except for the many — for society. What the school shall do depends, therefore, upon how it can serve society. The curriculum is an outline of what the school proposes to do. This must, therefore, be determined by the needs in society. Principles for guidance in making curricula must have their source in social problems and conditions. The school man who ventures to make curricula should be a student of social problems or rely much on the studies of such students.

Obligations of the curriculum-maker. Any one who is willing to undertake the task of making a curriculum on any such basis as that suggested above must recognize certain obligations:

1. The curriculum-maker must feel absolutely unhampered by the traditional curriculum. This does not mean that he is not to make use of the subject matter in the traditional school. His obligation is not to get away from the old school, but rather to supply the new demands most effectively. This may necessitate merely a careful selection of material vitally related to the school work and present needs. Social custom has become such a fetish that it may

be difficult for makers of curricula to renounce it and boldly face present and future needs. Against this danger the curriculum-maker must be on his guard. There is, to be sure, some danger on the other side: a danger that the curriculum-maker will glory in freeing himself from social custom and school habit. Racial as well as individual experience is helpful, and must not be ruthlessly disregarded. By putting these two dangers together we see the situation that the curriculum-maker must fearlessly face. He must be ready to study this really vital school problem with absolute frankness, using or discarding parts or all of the traditional curriculum, and introducing such subject matter as will result in an effective solution of the new problem.

2. The curriculum-maker must counsel with others. He must be influenced by the student of society — the sociologist; and by the student of the individual — the psychologist. He must be influenced also by tendencies in schools that are more nearly free from tradition. This policy makes impossible the making of a curriculum by an individual according to his own idiosyncrasies.

3. The curriculum-maker must so construct his principles and so organize the details of the work that the principles may be applied in all cases and the details may be readily altered to meet local and temporary conditions. The principles that may well control the curriculum in the schools of New York City should control also the rural schools in Arizona. In the traditional curriculum essentially the same details in geography, language, arithmetic, etc., are used in both places. This situation is probably not warranted by the real social needs. In his planning of details the curriculum-maker must provide for local adaptations.

4. The curriculum-maker must be loyal to his task and not compromise with the very conditions he seeks to improve. The usual school man cannot be classed with the curriculum-

maker: he is rather the man who makes adaptations of the curriculum made by another to suit his own local conditions. Moreover, the curriculum-maker as such is not a principal or superintendent of certain schools. The school man must compromise, in a way. That is, he must meet conditions though at the same time he must endeavor to improve those conditions according to a curriculum made by another. The curriculum-maker must feel free from local limitations but never indifferent or inconsiderate of them.

Loyalty to his task means that the curriculum-maker must be strictly constructive in his work, courageously adhering to his principles. Professor McMurry has stated a principle of this constructive character. "The subject matter for a curriculum should be selected from among those experiences that are related to life and are likely, owing to their intrinsic nature, to appeal to the pupils directly as worth while." [1] Such a principle forbids all question of omissions, so much discussed as a problem in curriculum-making. Professor McMurry's constructive principle provides no place in the curriculum for any topic that is not "related to life" and any topic automatically loses its place as soon as it ceases to function in relation to life. On this principle the curriculum-maker is wholly relieved of making omissions from the old curriculum. There is no old curriculum except on the pages of history. Again, such a constructive principle excludes such a problem as the "inculcation of interests and purposes in pupils." Studies related to the life of the pupils themselves are, with very few exceptions, if any, genuinely interesting to them. It is a truism that people are interested in those affairs that directly affect them. The curriculum-maker has not the problem of inculcating interests in pupils, though this will probably remain the large problem in school work as long as the

[1] *Teachers College Record*, Vol. 16, No. 4, page 3.

traditional curriculum is in use. The great problem of the curriculum-maker is to provide the subject matter that will intensify and broaden the interests which pupils already have, in so far, of course, as they are wholesome. Further, such a constructive principle consistently followed forestalls that great task of *method* in endeavoring to present to pupils that " larger value of subject matter . . . not necessarily apparent to the pupil in advance." [1] These larger values are seen by the adult when he looks into the subject matter known as geography, history, and language. The subject matter strictly related to the life of the pupil has a value only so large as is apparent to the pupil. The problem of method, occasioned by the effort to present a larger value than pupils are naturally prepared to appreciate, is reduced to a minimum by adopting a curriculum developed by the constructive principle stated by McMurry.

A source of danger. It has already been intimated that the hero-like worship of the traditional school studies is a serious danger for one who would make a curriculum in keeping with modern conditions. Here is a conflict similar to that pointed out by Professor Dewey fifteen years or more ago.[2] It is a conflict between the external conditions in the older group of school studies and the social aims of the modern school. That excellent constructive principle quoted in the preceding section must conflict continually with the unsocial formalism so securely intrenched in the traditional Three R's. " Ye cannot serve two masters " consistently. To avoid this danger it is simply imperative that the curriculum-maker and his counselors survey the needs of people and make out a course of study strictly in terms of those needs. To make such surveys and then resort at once to a reconstruction of grography, history, arithmetic, etc., by

[1] McMurry, F. M., *Teachers College Record*, Vol. 16, No. 4, page 3.
[2] Dewey, J., *The Educational Situation.*

means of omissions, enrichment, and motivation insures fundamental conflicts that seriously retard progress.[1]

PROPOSED PLAN FOR CURRICULUM-MAKING

Pursuant to the policy outlined above for the curriculum-maker, the curriculum outlined and discussed in this volume has been made as follows: In Chapter Six attention is called to some of the social conditions and problems that serve as a basis for educational principles. In such a study much reliance must be placed in the studies of students of social conditions and problems. In Chapter Seven a very brief survey of educational tendencies is made as a means of putting the curriculum-maker on guard against being too independent of the studies and practices of others. In Chapters Eight to Twelve, five principles for the construction of curricula are discussed. These principles are founded upon social problems and the interests of the individual. Chapters Thirteen to Sixteen present four school studies as the content of the curriculum proposed. A chapter follows with representative outlines of possible details. Later chapters include evaluations of methods and results in the use of such a curriculum.

It must be insisted that a curriculum thus made will be strictly tentative; never static. Such a curriculum can never become conventional, since it will be governed constantly by the conditions of life. These conditions are ever changing.

"There is, of course, no permanent solution of the social problem possible. In a world of change, each age is necessarily confronted by new problems which it alone can solve. Our quest must not be for a static solution, but for prin-

[1] An examination of the *Vocational Survey of Minneapolis* (1913) and the *Vocational Education Survey of Richmond* (1916) reveals the fact that surveys of life conditions are not in terms of traditional school subjects.

ciples which may guide us in seeking some rational control over the relations of men to one another." [1]

It must be insisted, further, that *a* curriculum is not *the* curriculum. We must have curricula, not one curriculum. Moreover, all these curricula should be of essentially the same character, a study of the environments and activities of people.

To the scientific student this plan of curriculum-making will probably seem lacking in scientific method. The material presented in the next few chapters has none of the tabulation of data used by some in the study of curriculum-making.[2] It may be said, however, that just such data are no less possible here; and it must be said that, in many of these scientific studies, there is danger that more attention is given to the reliability of method than to the reliability of the data used. The data, moreover, are taken from the more objective, mechanical parts of the schoolroom arts, not from the normal activities in home and community life. The method herein used may be regarded as the observational method. Curriculum-making grows out of continual observing in community life.

Supplementary Readings

Bobbitt, F. *The Curriculum*, pages 40–52.

Carlton, F. T. *Education and Industrial Evolution*, pages 73–95.

Dutton, S. T., and Snedden, D. *Administration of Public Education in the United States*, pages 314–340.

Hanus, P. H. *Educational Aims and Educational Values*, pages 45–70.

—— "Our Chaotic Education," in *Forum*, Vol. 33, pages 222–234.

—— "A Six-year High School Program," in *Educational Review*, Vol. 25, pages 455–463.

Horn, E. "Principles for Making Curricula in History." *Teachers College Record*, Vol. 16, No. 4, pages 33–59 (1915).

[1] Ellwood, C. A., *The Social Problem*, pages 220–221.

[2] Compare two groups of studies in Minimum Essentials presented in the *Fourteenth* and *Sixteenth Yearbook of the National Society for the Study of Education*.

McMURRY, F. M. *Omissions in the Course of Study.* National Education Association, 1904, pages 194–202.

—— "Principles Underlying the Making of School Curricula." *Teachers College Record,* Vol. 16, No. 4, pages 1–32 (1915).

—— "Controlling Ideas throughout the Curriculum." *Teachers College Record,* Vol. 4, No. 2, pages 1–13 (1903).

MYERS, G. C. "Some Factors Affecting Content of Curricula." *School Supervision and Administration,* Vol. 1, pages 611–616 (1915).

NATIONAL SOCIETY FOR THE STUDY OF EDUCATION. *Yearbooks: Fourteenth* (1915) and *Sixteenth* (1917).

SOLDAN, F. LOUIS. "Shortening the Period of Elementary Schooling." *Educational Review,* Vol. 25, pages 168–181.

WITHERS, J. W. *How the Course of Study Should be Determined.* National Education Association, 1914, pages 235–243.

YOCUM, A. D. *The Determinants of the Course of Study.* National Education Association, 1914, pages 223–235.

Statement Outline for Chapter Six

The school is not recognized as a social institution.
- School men are engrossed in school machinery.
- Responsibility should rest on school officials.
- "Social efficiency" is indefinite as an aim.

Sociologist and educator should coöperate.

Social development shows significant changes.
- In early society the individual was independent.
- As society developed, the individual became dependent.

In the various stages of society, educational implications are significant:
- Hunting, fishing, and pastoral stages: life is simple; little education is needed.
- Agricultural and handicraft stages: interdependence appears and social education becomes a problem.
- Industrial stage: specialization increases the educational problem by increasing interdependence.

Current social problems should effect changes in the curriculum.
- Specialization in industry must be accompanied by an improved mental attitude.
- Mechanical efficiency is dangerous without larger perspective.
- The country life problem needs more than a study of agriculture.
- Moral standards must be raised by a larger view of social service.
- Other social problems relate to the family, leisure time, religious life.

Conclusion: social situations demand of the schools a study of life as it is.

CHAPTER SIX

Social Problems and the Curriculum

PURPOSE OF THIS CHAPTER

In the preceding chapters attention was called to certain principles which seem to underlie the traditional curriculum but which are not in touch with modern life, and to criticisms strikingly adverse to the curriculum in present use. This criticism is exhibited on the one hand by pupils themselves in their early withdrawal — or elimination — from school, and on the other hand by adults in current inquiries, school surveys, and educational movements.

The traditional curriculum seems destined to considerable modification if it keep pace at all with the progress of the public which it is supposed to serve. In the present chapter an attempt is made to point out some examples of social conditions, to indicate some educational problems involved, and thus to suggest changes needed in the school curriculum.

THE SCHOOL AS A SOCIAL INSTITUTION

School men and school machinery. The importance of the school as a social factor in the community has seemingly not appealed strongly to educational leaders and to public school teachers. There seems to be more attention given to the securing of public support of the schools than to the rendering of social service through the schools. School officials and school teachers are not held sufficiently responsible for this unfortunate and unsocial situation. The explanation is usually attributed to conditions. For example school management is dominated by politics — politics of a sort; membership on school boards is influenced considerably by petty politics and personal considerations; school admin-

istrators and supervisors are not selected wholly upon a professional basis; continual banterings between large and small parties with interests predominantly self-centered disrupt any real social service of the school.

The situation in the Chicago schools during the past decade is an excellent illustration of this. "Recently in Chicago the superintendent of schools tendered her resignation on account of committee interference in professional matters for which the community has come to expect the superintendent to be responsible. An aroused public opinion was followed by the filling of vacancies in the board by members favorable to the superintendent's initiative in all educational policies and the board thus constituted refused to accept the superintendent's resignation. Thus was the modern principle of professional control in educational matters validated in our second largest city." [1] But such validation is clearly intermittent.

City politics have entered; labor parties have taken a hand; business corporations have played a part. In smaller cities and towns schools are prey to local politics. Again, low salaries and scant school supplies are looked upon as reasons for failure to render much social service. Further, the conservatism of the people is regarded as sufficient justification for the lack of social aggressiveness on the part of school officials.

Responsibility of school officials. But after all this is said, the real reason is found in the lack of social leadership on the part of school men and school women. Much attention has been given to studying the psychology of the individual, the nature of the child and the adolescent; school teachers have studied intensively and enthusiastically the Three R's and associated subjects both as to content and

[1] Report of United States Commissioner of Education, 1913, Vol. 1, page 95.

method of teaching; school administrators have devoted much time to school organization, management, and finance. On the other hand, there is evidence of too little study of social problems and the opportunity for social service on the part of the schools. The self-complacency of public schools engrossed in exercises quite distinct from the activities of society is due, in part at least, to this lack of knowledge of definite social problems and specific opportunities on the part of school men and women. All teachers, especially the leading officials, should acquaint themselves with current social problems. All school people should develop the habit of observing life activities about them and view school work in relation to that environment.

Social efficiency as an aim. The first reference to social problems of concern to public schools is an indication that at least one function of the schools is social in its nature. "Social efficiency" is the aim most emphasized among modern educators. Spencer advocated this aim for the schools when he insisted that children should be prepared for "complete living." Hanus amplifies this notion in the words: "To live completely means to be as useful as possible and to be happy. By usefulness is meant service, i.e., any activity which promotes the material or the spiritual interests of mankind, one or both. To be happy one must enjoy both his work and his leisure." [1] Butler advances the same idea in saying that to become educated one must acquire an "adjustment to the spiritual possessions of the race." [2] O'Shea adds that education "must seek to develop social action." [3] Bagley's contribution is: "(1) That person only is socially efficient who is not a drag upon society; . . . (2) That man only is socially efficient who, in addition

[1] Hanus, P. H., *Educational Aims and Educational Values*, page 5.
[2] Butler, N. M., *Meaning of Education*, page 17.
[3] O'Shea, M. V., *Education as Adjustment*, page 95.

to 'pulling his own weight,' interferes as little as possible with the efforts of others. . . . (3) That man is socially most efficient who not only fulfills these two requirements, but also lends his energy consciously and persistently to that further differentiation and integration of social forces which is everywhere synonymous with progress." [1]

Such expressions are well intended. The danger is that they may effect too little change in the work of school officials and school teachers. One recent effort to carry out this theory of social efficiency is recognized in what is characteristically termed "supplemental education." [2] The term "supplemental" implies that public school work does not supply adequate preparation for "complete living" and for "social efficiency." And further, the character of the education to which this term is applied indicates that study of a very practical sort not given in the public schools is needed. This supplemental education is given in correspondence courses, through which the student acquires information for immediate use in his own work; in evening schools, conducted for the special purpose of meeting practical needs, as in courses in "arithmetic for mechanics," "arithmetic for clerks," "arithmetic for errand boys"; in special schools, conducted in manufacturing establishments, mercantile houses, and the like, where employees are instructed in the everyday problems confronting them. The predominating character of this education is its directness in meeting real needs. This is one of the characteristic "present day tendencies in Education." [3]

We may readily recognize these tendencies, but we must also acknowledge that education of a direct, social-efficiency

[1] Bagley, W. C., *The Educative Process*, pages 62–64.
[2] Dean, A. D., *The Worker and the State*, pages 287–317. Leake, A. H., *Industrial Education*, pages 93–126.
[3] See Graves, F. P., *A Student's History of Education*, pages 418–440.

nature is not in our schools today. School men have accepted for some years this doctrine of social efficiency. Their failure to fashion the work of the schools in accordance with this doctrine and their tenacious adherence to the traditional curriculum which no longer effectively functions in present social life, are largely due to the two causes presented above. First, school officials and school teachers do not read simple social studies within their reach and in consequence do not observe simple social conditions in which they work sufficiently to be informed as to how the schools could function in their social environment. Second, social efficiency as an educational aim is usually presented in too general and indefinite terms to enable many school people to profit much by it. Modern educational psychology emphasizes the particularizing of instruction. That principle should be applied here.

SOCIOLOGIST AND EDUCATOR

School men must not attempt to be original students of social conditions. Reliance may be placed upon the studies of sociologists. These men are supplying an abundance of literature presented in untechnical language, most helpful to teachers. The books referred to in this chapter, and indeed other books of this type, should be more generally read by school administrators and school teachers. If our public schools are to serve the community as well as the individual, they must be wisely directed upon the basis of intelligent interpretation of social conditions. Interpretation of social conditions is the responsibility of the sociologist. Adjustment of school work to his findings is the responsibility of the educator. The social problems referred to in this chapter are taken directly from the writings of prominent sociologists. For the suggested educational application the author is himself responsible.

CHANGES IN SOCIAL DEVELOPMENT

On the basis of some acquaintance with present social problems, a better perspective is secured by taking note of significant changes that have taken place in social life. A brief statement of some of these changes seems advisable here, especially for the sake of certain educational implications involved.

Early society: the individual independent. School men are not now meeting for the first time real social problems. Social problems are coincident with human society.

In the first chapter of his book, *Studies in the Evolution of Industrial Society*, Ely gives an interpretation of the development of society which deserves the thoughtful consideration of one who wishes to study educational problems in relation to social conditions. Here is pointed out in a striking way the contrast between the relation of individuals to a simple society and the relation of individuals to a very complex society. "Early society is little more than a mere mass of men, composed of individuals with like occupations, like habits, like beliefs. In a few individuals we see all. . . . Of course, even the rudest society that we know is not entirely homogeneous . . . and yet, on the whole, one man lives about the same life as does every other man." [1] "The New Zealander . . . is acquainted with every department of knowledge common to his race: he can build his house, can make his canoe, his nets, his hooks, his lines; he can manufacture snares to suit every bird, and form his traps; he can fabricate his garments, and every tool and implement required. It is not a single individual, or a few only, who are adepts in these various arts, but all." [2] An individual is

[1] Ely, R. T., *Studies in the Evolution of Industrial Society*, pages 7–8.
[2] Quoted by Ely, R. T., *Studies in the Evolution of Industrial Society*, page 8.

of little importance in such society. Let one be removed and the others are little affected. One contributes nothing to the group; each one is independent, so far as his own welfare is concerned.

Later society: the individual dependent. The evolution of society, from that early simple grouping of people to the present complex grouping, has been essentially a change in the relation of individuals to the group with which they associate. As each individual increased his contribution to the welfare of the group and at the same time balanced his personal accounts by becoming the more dependent upon that group, society developed. Increase in one's contribution to the group and increase in one's dependence upon others in the group are accompaniments of specialization. Modern society is highly specialized; each individual is greatly dependent; he is correspondingly responsible for serving society. Note the very disastrous consequences to a large number of men and women in a great variety of occupations when one small class of individuals — for example, those who work in coal mines — choose to go on strike. The more complex society becomes, the more important to society does each individual become.

Recognizing this complex social order, it may seem impossible that any school can be conducted now in which all pupils are taught as one, as though the modern interdependence were not known. But exactly that is possible, and it is against just such current practice that progressive school men are struggling. Change in school work will take place slowly until school officials and school communities become better informed as to the nature of this social change and the educational significance of this interdependence of individuals. The responsibility for the first rests with students of sociology; for the second with students of education.

STAGES OF SOCIETY AND EDUCATIONAL IMPLICATIONS

Life simple: little education needed. For the purpose of noting further educational implications, it is well to look somewhat more closely at some of the social changes that have been taking place.

The development of social organization has been by no means one of simple chronological advancement. For the sake of more clearly describing this advancement, writers have pointed out "stages" in the evolution of society. These stages differ somewhat with different writers. Ely[1] presents five such stages: (1) hunting and fishing; (2) pastoral; (3) agricultural; (4) handicraft; (5) industrial. Descriptions of these stages by various writers might suggest that there is a definite order of development. On the contrary, Carver points out that such is not always the case. "In different times and places there have probably been savages who never depended upon the hunting of animals and the catching of fish for their food supply, subsisting rather upon fruits, nuts, and edible roots. . . . Again, it has been too frequently assumed that the second stage is always the pastoral stage. . . . On the contrary, it is certain that, in some cases at least, the tilling of the soil followed immediately after the hunting stage even where men had lived mainly by hunting and fishing. . . ."[2] Carver further calls attention to other irregular changes. In some cases, such as in that of the ancient Phœnicians, commerce developed directly out of fishing. The American Indians have been regarded as formerly agriculturists and later hunters by reason of the abundance of game.

In the hunting and fishing stage people were so directly dependent on what nature supplied that adjustment called

[1] Ely, R. T., *Studies in the Evolution of Industrial Society*, pages 25–73.
[2] Carver, T. N., *Principles of Rural Economics*, page 29.

for no great struggle. Not much progress was made in inducing nature to supply more liberally. With life so simple and without ambition to advance the manner of their living, their preparation for complete living was sufficiently acquired through the simple acts of hunting and fishing.

In the pastoral stage domesticated animals were used. People roved from place to place as they could find pasture for their cattle. "Warlike habits continue. . . . There is no special development of the arts nor of slavery, for these are especially characteristic of a relatively peaceful existence."[1] As in the hunting and fishing stage of social progress, so here education for social efficiency has practically no significance.

Social interdependence: education becomes a problem. In the agricultural stage there was a marked change in social relationships. People were somewhat settled in communities and some interdependence was experienced. However, in the main, "Each group raised and made the things which it needed. The wants of the people were simple, and food, clothing, and fuel could all be obtained at home."[2] In a phase of life so simple, social efficiency was readily acquired by merely following the example of elders in the group. Instruction in any definite form was not needed. And educators might well recognize that people may be found today in this agricultural stage who have no ambition to better their condition. Not until such ambition is aroused by real contact with other groups more favorably situated by reason of higher forms of social and industrial relationships can any form of school work function in the advancement of social efficiency.

In the handicraft stage there was a very decided increase in the amount of interdependence. Almost all houses were

[1] Ely, R. T., *Studies in the Evolution of Industrial Society*, page 43.
[2] *Ibid.*, page 50.

inhabited by men who were both cultivators and artisans; one was a tanner, another a shoemaker, another sold goods, but all were farmers. The status of an individual was somewhat determined by the quality and quantity of his service to others and the kind of aid he asked of others. Competition appeared. Problems of social relationship were more in evidence. " . . . the household was practically the center in which were carried on, or about which were clustered, all the typical forms of industrial occupation. . . . practically every member of the household had his own share in the work. . . . It was a matter of immediate and personal concern, even to the point of actual participation." [1] Dewey points out certain factors of discipline and character-building in this phase of life: habits of order and industry, the sense of responsibility and obligation to do something to contribute to the common weal.

Within this stage schools existed. Instruction in the Three R's and some allied subjects was given. Yet social efficiency in this household and neighborhood system was acquired *largely* — almost exclusively — through the individual's participation in the practical activities of the home and neighborhood. In this handicraft stage social problems were not yet complicated, but the individual's adjustment was made through conscious attention to affairs actually taking place in the life of the family and community.

Social life complex: educational problem complex. In the industrial stage people find themselves in a great whirl of complicated social situations. Men are studying and planning. Their inventions bring about great changes in the nature of work. The household system, in which each individual was acquainted with, if not a participant in, every phase of work, has given way to the factory system, in which the individual is responsible for only one small part.

[1] Dewey, J., *School and Society* (1915 edition), pages 6, 7.

His work is very limited. He is a specialist. The more specialized the work of the individual, the greater is the interdependence among individuals. The greater this interdependence, the more complicated become the social situations. This in turn increases almost immeasurably the significance of social efficiency and the task of educating the youth to meet this increasingly complicated situation.

Little observation and thought are needed to convince one that present social and industrial life teems with problems for sociologist and educator. Any attempt to " round up " these problems would be discouraging were they not so interesting. A mere acquaintance with a few of these has suggested to the author the basis for the elementary curriculum presented in this book and briefly outlined in Chapter Seventeen. No attempt is made here to list any considerable number of present-day social problems, or, indeed, to give a general view of an organization of such problems. Such a list would be too long and any organization would smack too much of the glittering generalities of social efficiency objected to above.

CURRENT SOCIAL PROBLEMS AND EDUCATIONAL CHANGES

In the remaining part of this chapter an attempt is made to call the attention of school men to types of social problems which should affect to a very considerable extent the work of the schools. In pointing out these problems some indication will also be given of their educational significance — how they make strong demands for a change from the worn-out traditional curriculum to one in tune with strictly modern life.

Specialization and mental attitude. Specialization in industry is one of the consequences of invention. Unquestionably such specialization demands that workmen concentrate attention and effort in the interests of economy

and efficiency in the industry. There is serious danger that this be at the expense of the individual as a citizen. Florence Kelley points out the baneful effects upon boys and gray-haired men whose specialized work is the looking for dents in tin cans as they pass, one of the last stages in the factory. "This work called for no quality of mind, but sustained attention to a horrible monotony. . . . That can-watcher is a type of millions of men who, in an infinite variety of ways, are reduced to some one form of attention. Often that is the sole demand upon one, his other powers atrophy by disuse. But the permanent tendency of industry is to install more automatic machines, to require more tenders, perhaps one for one machine, perhaps one for six, eight or twenty. And their inevitable tendency is to make the machine tender automatic like themselves. . . . Had the educated men of my generation been trained in youth to insight and vision, to discern the industrial process of stupefying and, on the other hand, the demand of expanding democracy for intelligence in all the citizens, how different must have been their recent attitude toward the movement for a shorter working day, for one day's rest in seven, for the abolition of night work in every possible case!" [1]

Florence Kelley here presents the point of view of social efficiency in contrast to machine efficiency. Machine efficiency is not to be lessened, nor are school men to attempt to relieve, directly, the monotonous service of the boy or the man who looks for dents in tin cans. On the other hand, schools are in danger of training boys for just that character of work. The traditional curriculum, as carried out in large systems of crowded schoolrooms and in one-room country schools of few pupils, gives boys and girls exercises similar to that of looking for dents in tin cans. One illustration is striking, but is quite typical.

[1] Kelley, Florence, *Modern Industry*, pages 102–105.

Among the pupils of the school, most of whom, as might be expected, are much over-age in comparison with the work of the curriculum with which they are engaged, was observed a boy with the physical proportions of a good-sized man.

"How old is this boy?" we asked.

"He is seventeen," replied the head teacher.

"How long has he been here, and what is he studying now?"

"He has been here a year and a half; he is now doing fifth-grade work."

"How long will he probably continue in school?"

"Three years or more."

"Will he be required to pursue the same course that all pupils now in the fifth grade must pursue, technical grammar and all?"

"Yes, it is our aim to make him like normal children."

"But what good will so many years' study of purely technical grammar do this young man who, presumably, must soon try to earn his own living in some way?"

"Why, technical grammar broadens the mind!" replied the head of the school, obviously somewhat surprised at the question.

Think of it! Three or more years' study of technical grammar to "broaden the mind" of a youth now in grade five, struggling with part twenty-six of the rigid educational mechanism, but already old enough either to be through with his secondary education or to be out of school bearing a man's part in the world's work! What will this unfortunate young man be able to do at twenty-one, when he goes out from this child's school, his sole trained equipment a mind "broadened" by several years' study of technical grammar? . . .

The treatment of this boy — young man — makes to stand out clearly, but does not exaggerate in the least, the spirit and the thoughtless routine that dominates the elementary schools. The only recognition accorded the individualities of pupils, no matter how much they differ through peculiar strength, weakness or defect, is the recognition that the school mechanism compels; their treatment varies only in so far as it is necessary to vary it temporarily that every one may learn exactly the same things — that every one else must learn. All must be made just as nearly alike as possible. To this mechanical end every phase of the elementary curriculum and its administration seems to be adjusted — and very nicely and thoughtfully adjusted. [1]

[1] Report of the Survey of the Public School System of Portland, pages 102–103.

Many tests and uniform standards now so popular among school men and school teachers — but not among school pupils — have a similar effect.

Florence Kelley has indicated one educational problem, viz., the education of the rising generation so that as adults they will have that insight into these social situations and that sympathy with the employees which will, through the ballot, forbid long, strenuous hours of monotonous and degrading work. But something more fundamental is needed than influence through the ballot. The rising generation must be educated, not merely to forbid that which is socially unwholesome, but, on the positive side, to develop in the rank and file of laboring people that habit of mind which leads them to do more thinking while they work and to find a more helpful enjoyment while they are at leisure. Highly specialized work is inevitable, from the lowest to the highest stages. Certain routine is quite essential. Long hours will probably be shortened or relief provided through change of work. But mental attitude is all-important in social control among men at work and in leisure. This mental attitude may be acquired only by prolonged attention from youth up to those activities and interests which constitute the life of people. Such a program of study is advocated in this volume and outlined in Chapter Seventeen.

Mechanical efficiency and perspective. Closely allied with the specialization in industry just noted is the social situation in which the employee is so confined to his own work that he knows nothing of what it is all about. This may contribute to mechanical efficiency.[1] It is unquestionably injurious to social efficiency. Social disturbances are very largely due to a lack of perspective. Theft is com-

[1] Well worth reading in this connection is Edmond Holmes' discussion of "What is, or The Path of Mechanical Obedience" in his book entitled *What Is and What Might Be.*

mitted without thought of the significance of ownership in community life. Puffer well illustrates this in his report of the boy who was committed to the State Reform School for stealing. He acquired the needed viewpoint only when his own prize melon was stolen from him.[1] "If a working man is to have a conception of his value at all, he must see industry in its unity and entirety; he must have a conception that will include not only himself and his immediate family and community, but the industrial organization as a whole. . . . Feeding a machine with a material of which he has no knowledge, producing a product, totally unrelated to the rest of his life, without in the least knowing what becomes of it, or its connection with the community, is, of course, unquestionably deadening to his intellectual and moral life."[2] On the basis of her rich experience in directing the work at Hull House in Chicago, Miss Addams points out that workmen, when free to choose, seek the larger viewpoint of their own work, a natural "rebound from the specialization of labor to which the workingman is subjected." This trait is undoubtedly commendable, though it is to be feared this "rebound" carries the laborer far beyond his understanding.

Our traditional curriculum is the goal of this extreme rebound. A broad viewpoint (of a certain type) of arithmetic is presented, but there is good evidence that the glittering generalities are far beyond the comprehension and appreciation of boys and girls of school age. The same may be said of geography, language, and the like. But in these school subjects material is presented so foreign to real activities in life that no perspective for any kind of employment is given. When these pupils finish school and enter various employments, especially of a specialized character, they remember

[1] Puffer, J. A., *The Boy and His Gang*, pages 99–101.
[2] Addams, J., *Democracy and Social Ethics*, pages 213–214.

something of the Three R's, but they now experience a narrow phase of work with no relation to those school subjects — and more, as Miss Addams has pointed out, without seeing a relation of their own work to the rest of the industry. Employers and even the wage-earners themselves have used various means of educating workmen. But even at their best such methods are tardy, and the mental attitude of employees, thinking of their work and of the industry of which their work is only a small part, cannot be so readily or assuredly acquired as at a younger age. Observing, thinking, studying in terms of life activities should characterize the attitude of mind from childhood up. To this end the public school curriculum pursued by the masses of young people, most of whom will soon be employed in industrial or commercial work, should relate directly to the more usual occupations and activities of people.[1]

Big business and rural education. Big business, as one of the chief characteristics of modern industry, is having a very noticeable effect on the migration of country people into the city. Large cities are becoming larger by leaps and bounds; country districts are increasing only by small percentages. Many sections show even a positive decrease. "Thus, between 1900 and 1910, while every state in the union increased its urban population from 10 to 250 per cent, all the more populous states of the country increased their rural population less than 10 per cent, and six states, including four great agricultural states in the Central West, showed an absolute decrease in their rural population." [2] This marked shifting of the population has an important influence upon social situations in both city and country. The country problem may be selected here quite arbitrarily.

[1] This topic will be more fully discussed in Chapter Nine.
[2] Ellwood, C. A., *Sociology and Modern Social Problems*, page 265.

Recent studies in country life — and there are many of these — seem quite in agreement that one of the great problems is that of maintaining people of high, or at least average, quality upon the farms. But the very writers who point out this problem are most optimistic as to the results. Some even go so far as to claim that " the sifting of the country community in recent years has on the whole improved it." [1] Carver views this problem as one which demands serious effort, though without interference with an optimistic attitude. " In order that young men and women of talent and capacity may be induced to remain on the farms, rural life must be made attractive to them. Farm life cannot be attractive to such men and women unless it offers opportunities for a liberal material income, for agreeable social life, and for intellectual and æsthetic enjoyment." [2] In many sections of the country the adult rural community has made vigorous effort to meet this problem by various organizations. The Grange is probably the most extensive and best known. Farmers' institutes are common. The good work of such organizations is not to be questioned if the young people are reached early enough — before they have yielded to the temptation to go to the city. In the beautiful farming district of Randolph Township, Ohio, a Farmers Club has been in existence for fifty years, seldom failing to meet once each month. But it has failed to reach the young people, and the population of that rural township has been continually diminishing. Rural sports and recreation are too generally organized by adults, and, as such, too frequently fail to appeal until it is too late. Recreations arranged by the young people themselves are too generally a relief from the drudgery of farm work and not a real part in their lives, as vital as work itself. The New England farm

[1] Wilson, W. H., *The Evolution of the Country Community*, page 102.
[2] Carver, T. N., *Principles of Rural Economics*, page 339.

boy is promised permission to " play ball after he has done up the chores." [1]

Such remedial measures do not reach the root of the matter. The mental attitude of boys and girls has not been shaped sufficiently early. Writers on the social phases of rural life advisedly speak only in general terms of what the school should do.[2] Those who are more concerned in educational problems see in the teaching of agriculture and manual arts a large part of the solution.[3] The traditional curriculum with much of its empty formalism, would continue as central in the school. But again, this does not seem to reach the root of the matter. And further, all rural advocates seem to try to retain the country boy and girl, but they make no suggestion by way of inducing the youth of the city to migrate to the country. Inbreeding is injurious to life, and the rural community has seemingly suffered. Exchange of life is highly desirable. Rural social life would probably profit as much by the infusion of urban customs as city industry profits by the incoming of vigorous, capable, and enterprising country youth. But this exchange is not to be made by teaching all country children and some city children the attractions of country life, assuming that the city will attract its share without special instruction. The Three R's and allied subjects now in the traditional curriculum present the glittering generalities of life in both city and country without differentiating them. A new form of curriculum is needed that will present in striking detail the attractions and the difficulties of a great range of industrial and social activities, both urban and rural. These studies should be presented alike — or nearly so — to city and country children. As a result of such a system of instruction, country youth

[1] Warner, C. D., *Being a Boy*, page 12.
[2] See Carver, Butterfield, Wilson.
[3] See Cubberley, Kern, Davenport.

will continue in rural life and city youth will migrate to the country to the extent that rural opportunities for work and for leisure appeal more strongly than urban opportunities. The economic law of supply and demand will have much influence. But of no less influence will be the social law of individual and community relationship. The city school, the country school, and rural life advocates must attack this rural problem in a more fundamental way than by teaching agriculture as an appendage to the formal Three R's and thus persuading many boys against their wish to remain on farms, or by making rural life tolerable through the use of plays and festivals designed for that purpose. From childhood up, children must develop an attitude of mind, some inclined to rural life, some to urban life. This attitude is developed through gaining an insight into a wide range of industrial employments and social activities, both rural and urban.[1]

Moral standards and education for social service. Moral standards for the guidance of both individuals and groups of people have never presented so conspicuous a social problem as at present. Gigantic industries, powerful corporations, and complicated governmental systems have occasioned the lowering of moral standards. Material gain is largely the measure of success in modern industry, and the individual loses nearly all sense of personal responsibility in a crowd. The prominence of the young malefactor[2] and the adult criminal is the result of the dominance of material gain and egoistic interests. "The very forces which undermined Roman civilization, viz., commercialism, individualism, materialistic standards of life, militarism, a low estimate of marriage and the family agnosticism in religion and in ethics, seem to be the things which are now prominent, if not domi-

[1] For further discussion of this notion see Chapter Thirteen.

[2] Consult such books as Travis, T., *The Young Malefactor;* Eliot, T. D., *The Juvenile Court and the Community;* Bowen, L., *Safeguards for City Youth at Work and at Play.*

nant, in western civilization." [1] Much is being done on the part of public officials and private enterprises to safeguard the youth, to suppress vice, to punish the criminal; but all such means come too late to construct effectively a disposition in individuals to live together harmoniously. In his discussion of *The Social Problem*, Ellwood does not discountenance the commonplace methods of attempting to prevent social evils and maintain social standards, but he insists that the solution must be found in a more fundamental philosophy of life. Social service must be the aim of business corporations as well as individuals. In right habits of life in relation to the lives of others is found the essential corrective of loose moral standards due to the worship of material gain and egoistic advancement.

" So our hope of solving the social problem must be not through revolution, external machinery, or one-sided reforms but through the education of the young, the transformation of the ' subjective environment ' of ideals and values in society, and the development of a well-balanced program of social progress. The development of a fuller social intelligence and social character in the individual is the heart of our problem. Practically it becomes, therefore, largely the problem of social leadership and social education. Social machinery and even social ' mutations ' may assist, but they are powerless without the inner, spiritual transformation of our social life, since that life consists in the mental attitudes which individuals maintain toward one another." [2]

Here again is emphasized the significance of " mental attitude " in all individuals making up society. The sociologist leaves to the student of education the responsibility of suggesting the details of the " social education " advocated by him. With this social problem in mind, the school man

[1] Ellwood, C. A., *The Social Problem*, page 4.
[2] *Ibid.*, pages 231–232.

is forced to question to what extent the traditional arithmetic contributes to that mental attitude of social service, on the part of large business concerns as well as on the part of individuals. The same question must be raised relative to all the other subjects usually found in our public schools. There is scarcely a place in the whole range of our public school curriculum where even the theory of social service is presented. This might at times be found in elementary civics or in moral lessons, but even then the instruction is so incidental and so indefinite in nature that little if any lasting effect is made upon the mental attitude of the youth. Mental attitude toward social service, as may be exhibited in various phases of industrial and social life, can be developed only by direct observation and study of men engaged in such activities. Young people in the schools must be enabled to study the work of the blacksmith, the banker, the manufacturer, the commercial traveler, the government officials, and the relation of these men to the social life of the community in which they work. In the public schools it has been too long assumed that somehow, sometime, somewhere, pupils, carefully trained to read, write, and cipher in accordance with standards established for those school exercises, will adapt themselves to the complicated social conditions in which they later find themselves.

Other social problems. Only a few of the almost innumerable social problems have been presented here, briefly. But these are sufficient to suggest the type of problems that leaders in public school work should study, and the significance such problems should have in relation to the curriculum in our public schools. A few other such problems may be merely named.

1. The disintegration of the home and family due to the necessity of various members contributing to the support.[1]

[1] Kelley, Florence, *Modern Industry*, pages 3–37.

The schools have a large opportunity to contribute very considerably to the amelioration of this situation.

2. The proper spending of leisure time.[1] The schools have as yet contributed practically nothing to this serious situation, but just here is one of the very greatest of opportunities in influencing the social behavior of youth and adult.

3. The market price of intelligent interest of workmen, and the coöperative association of employees in industry.[2] Our public schools, in content of work and especially in method of management, are contributing scarcely anything to the development of an attitude of mind in anticipation of such situations.

4. Simple means of village improvement.[3] How very little the school contributes to the improvement of its own local environment!

5. Religious life.[4] Here is a delicate situation to be approached by the American public schools. But there is a rich opportunity to develop an attitude of open-mindedness that would contribute much to a more wholesome and helpful religious attitude in community life.

SOCIAL PROBLEMS AND THE CURRICULUM

It is needless to suggest here more of these social situations and the educational problems involved. It is important to urge the significance of such problems as determinants of the public school curriculum and public school management. Only by a careful study of such definite problems can school administrators and school teachers contribute much to making the public school function in social efficiency. Those who advocate social efficiency must have in mind

[1] See discussion of this in Chapter Twelve and note references there given.
[2] See Addams, J., *Newer Ideals of Peace*, pages 151–179.
[3] See Farwell, P. T., *Village Improvement.*
[4] See Wilson, W. H., *The Evolution of the Country Community.*

social service in specific situations. A general theory of social efficiency effects nothing.

Ellwood rightly says: "The truth is that we have not yet become seriously interested in the social problem. We have been so interested in the conquest of nature and in individual achievement, that the problems of human relationship have not greatly concerned us; . . ."[1] But the student of social and industrial life cannot but be convinced that, at least for the great majority of people, the important problem for each individual is: How can I conduct my own vocational and avocational affairs so that they will be in the greatest harmony with the vocational and avocational affairs of other people? Society rightly demands of the schools a generous contribution. She demands that the schools serve pupils and community in a very direct, practical way. School officials and school teachers are asked to face social conditions as they are. They are asked so to conduct the school work as to contribute very directly to practical life. And by practical life is meant all the profitable and enjoyable acts that make up a wholesome living. The schools can comply with this demand only by helping the rising generation to observe and study, in the concrete, a great variety of industrial activities and human relationships that make up our social life. Such a program is advocated in this book and outlined in Chapter Seventeen.

And the school as a social institution in the service of the home and community is most natural. In Chapter Two was presented the theory of general discipline as a principle underlying the traditional curriculum. It was pointed out that that theory has been supplanted by the theory of special powers. When applied to the social problems presented in this chapter, it must be concluded that the traditional subjects function in these social situations only to the extent

[1] Ellwood, C. A., *The Social Problem*, page 221.

that reading, writing, arithmetic " carry over " into farming, blacksmithing, " spotting " dents in tin cans, maintaining integrity in oil-refining business, etc., etc. Psychological studies resulting in favor of the development of special powers are in strong support of the position taken in this chapter; viz., the schools are responsible for equipping boys and girls for the social situations in which they are now living, and for preparing them for the social emergencies of later life, by developing in them a socialized mental attitude through direct observation and study of a great variety of activities and situations which make up the social life of people.

Supplementary Readings

ADDAMS, JANE. *Democracy and Social Ethics*, pages 137–220.
—— *Newer Ideals of Peace*, pages 124–208.
—— *The Spirit of Youth and the City Street*, pages 3–21, 107–135.
BUTTERFIELD, K. L. *Chapters in Rural Progress*, pages 11–65, 162–203.
CARLTON, F. T. *Education and Industrial Evolution*, pages 3–18, 45–72, 140–149.
CARVER, T. N. *Principles of Rural Economics*, pages 29–116, 334–382.
CUBBERLEY, E. P. *Rural Life and Education*, pages 6–176.
—— *Changing Conceptions in Education.*
DEAN, A. D. *The Worker and the State*, pages 25–60, 287–317.
DEWEY, J. *School and Society* (1915 edition), pages 3–28.
ELLWOOD, C. A. *The Social Problem*, pages 1–47, 220–249.
ELY, R. T. *Studies in the Evolution of Industrial Society*, pages 3–99.
INGLIS, A. *Principles of Secondary Education*, pages 340–366.
KELLEY, FLORENCE. *Modern Industry*, pages 3–138.
KERN, O. J. *Among Country Schools*, pages 1–33, 342–366.
MANGOLD, G. B. *Child Problems*, pages 15–91.
WILSON, W. H. *The Evolution of the Country Community*, pages 91–216.

General References

BOWEN, LOUISE. *Safeguards for City Youth.*
CARNEY, MABEL. *Country Life and the Country School.*
CUBBERLEY, E. P. *The Improvement of Rural Schools.*
DAVENPORT, E. *Education for Efficiency.*

DEWEY, J. *Moral Principles in Education.*
ELIOT, T. D. *The Juvenile Court and the Community.*
ELLWOOD, C. A. *Sociology and Modern Social Problems.*
FARWELL, P. T. *Village Improvement.*
GEORGE, W. R. *The Junior Republic.*
HENDERSON, C. R. *Citizens in Industry.*
HOLMES, E. *What Is and What Might Be.*
SPARGO, J. *The Bitter Cry of the Children.*
TRAVIS, T. *The Young Malefactor.*
ZUEBLIN, C. *American Municipal Progress.*

Statement Outline for Chapter Seven

School changes take place the more readily where the purposes are less strongly allied to tradition.

Some private schools, in England, Germany, and the United States, present striking tendencies to adapt their work to modern social conditions.

Professional training schools are studying this problem.

Public schools are responding to the new demands.

- Universities are encouraging secondary schools through more liberal entrance requirements and extension service.
- Secondary schools are providing for industrial education.
- Elementary schools are giving more attention to the study of the activities of the community.

Miscellaneous educational agencies contribute to the tendency to study contemporary life.

- Textbooks contain more of the "practical."
- Publications on practical subjects are increasing.
- Motion pictures portray life activities.
- Junior civic leagues connect school and town.
- The wider use of the school plant is demanded.
- Legislative enactments, both national and state, encourage the study of modern life.

School practice follows social aims.

CHAPTER SEVEN

Some Educational Changes

CONDITIONS FOR CHANGE

Society is making more urgent her demand that educational agencies contribute more directly to practical life. The question may now be asked: How are the schools and other educational institutions responding to this demand? If there were no response, society might not be justified in asking such a contribution from the schools. Or, perhaps, the schools must be judged incapable of compliance with such a demand, and for that reason they must continue in the traditional course. Neither of these possibilities exists. Society is wholly justified in calling upon any of her social institutions — schools, churches, prisons, charity organizations, and the like — to serve people in a very practical way. Further, schools are by no means incapable of compliance. Many evidences of this fact may be found; a number of these are presented in this chapter.

That type of school most weighted down by traditions and forms will be most tardy in response. That type of school most free from traditions and forms will, probably, be the first to respond.

Large public schools belong to the first class. Their work has been in process of development for years and even centuries. Earlier practices tend to continue. With changing conditions in social life, purposes in school work change. But school practices follow very tardily and thus purposes and practices are commonly without close relation. Functionless practice means empty form. All this is exaggerated in large school systems. Meeting new demands, where change is involved, is also considerably influenced by the attitude of the school community. Large school communi-

ties are generally more conservative than small districts. Extensive changes in large city systems cannot be made readily. Such are the explanations given for much of the failure of public schools to promptly meet the practical needs of contemporary life.

On the other hand, private schools have a decided advantage at the very point where public schools are handicapped. These schools are usually founded for specific purposes. They are less hampered by tradition. To be free from the traditional practices of public schools is frequently the occasion for the opening of the private school. The headmaster of the Abbotsholme School pointedly remarks that it is impossible to realize certain ideals in present day life through any system which has a more tender regard for tradition than for the boy. Then, too, private schools are quite limited in the number of pupils enrolled and more selective in the character of those enrolled.

Higher educational institutions, such as universities, professional schools, and educational agencies connected with industrial and social establishments, will be recognized as having a very considerable influence in shaping educational training to industrial and social needs. This is due in one case to strong educational leadership, and in the other to the strong leadership of business men.

The purpose of this chapter is to point out evidences of what seem to be tendencies to modify the curriculum in compliance with the most recent changes in social life. The curriculum outlined and advocated in this volume may seem at first quite radical. But when present-day tendencies are noted, the proposed plan of school work is seen to be only in line with such tendencies, though admittedly quite free from traditional practice. Evidences of these tendencies are selected from three groups of institutions: private

schools; public schools, including normal schools and universities; and miscellaneous educational agencies.

PRIVATE SCHOOLS

Sargent[1] briefly describes approximately one thousand private schools in the United States and Canada. A large number of these are strictly preparatory schools. Their work is thus largely determined by the entrance requirements of the colleges with which they are professionally affiliated. Many of these private schools are for the children of well-to-do parents, who pay high tuition rather than have their children in public schools. In such schools there is no distinctively professional purpose. It would be practically impossible to classify these thousand schools and then draw any reliable conclusion as to their tendency to respond to recent social changes. It is sufficient for this discussion to note certain schools that have attracted national or even international attention. These may be accepted as indicating the tendency in progressive private schools.[2]

In England certain "home" schools clearly indicate a decided effort among progressive school men to adapt school work to life needs. Abbotsholme School, Ingleholme School, and Bedales School are representative of such schools. The Central Schools, referred to later under Public Elementary Schools, indicate a similar practical tendency.

In Germany the Pestalozzi-Froebel Haus in Berlin, and an experimental school in Munich organized by an educational leader, Dr. Georg Kerschensteiner, represented "learning, certainly, but living primarily."

In the United States. Prominent among the progressive private schools in the United States are the Ethical Culture

[1] Sargent, P. E., *Handbook of American Private Schools.*

[2] Many other private schools might well be included among those here referred to.

School of New York City and the Francis W. Parker School of Chicago. These schools aim at certain aspects of real life with more directness and positiveness than is found in the rank and file of our public schools. The course of study in the Ethical Culture School is " broad in its scope in order to embrace the varied interests of modern life." Here Froebel's principle, " Come, now, let us live with our children," is clearly in evidence, in the emphasis placed upon the close relation of the school to the normal activities of the pupils. True, this school centers its attention on ethical training. This is not a narrow aim. The life activities of the child are more definitely affected than through a curriculum of the general and traditional stamp.

The Francis W. Parker School aims very definitely at the development of that character in the pupil which will enable him to coöperate more efficiently in home and community life. Special effort is made to adapt the studies to experience. " The dynamic value of interest in work is secured by presenting to the pupil subjects for study in some relation to his own life and experience. He is not asked to consider isolated mathematical abstractions, but taught to measure and compare actual dimensions and quantities. He is not asked to learn to spell and to read by committing to memory combinations of letters and words which have for him no essential meaning, but he masters the technic of language through its constant use in the study and expression of thoughts within the range of his experience. And since his experience includes his life in school as well as his life out of school, by his teacher's help and guidance he gradually comes to understand the practical bearings of all the elementary forms of knowledge." [1] Both in the organization of the course of study and in the spirit of work within the school the centering of the work about the activi-

[1] School Circular for 1914–1915, page 5.

ties of the school and the larger community is marked. The " common branches " are found in the course of study, but throughout these there is striking evidence of attention to social and industrial activities.

In San Diego, California, there is a second Francis W. Parker School. Here " special emphasis is laid on service to others in all lines of work and recreation, that the children may realize from the beginning the value of social service to the community." Real life experience is made the occasion for studies in formal subjects. " When the problems are derived from the child's experience in play, construction and group work, arithmetic becomes real. The period of vigorous drill begins when the child realizes the need of efficiency in computations." [1]

The Fairhope School at Fairhope, Alabama, is a private school that is winning the attention of educators as a school which provides education as natural development.[2] The underlying principle of this school, as pointed out by Professor Dewey, is Rousseau's central idea: " The child is best prepared for life as an adult by experiencing in childhood what has meaning to him as a child; and, further, the child has a right to enjoy his childhood." The conventional curriculum is quite set aside, as unsuited to the present needs of the pupils. Direct study of the natural environment of the children is substituted. The increased motive for industrious application on the part of the pupils and more effective learning as the inevitable by-product of such activity can hardly be questioned.

A number of other private schools have been instituted for the specific purpose of more directly helping boys and girls to adjust themselves to the everyday activities in

[1] School Circular, 1914–1915.

[2] For a description of this school see Dewey's *Schools of Tomorrow*, pages 17–40.

which they are normally engaging than is provided in the traditional public school. The Shady Hill Country Day School [1] was established in 1912 by a group of parents who desired for their children better conditions than are offered by the ordinary day school. "They wished the studies to be connected so closely with the daily lives of the children that they would learn to apply themselves with a degree of voluntary concentration that is rarely attained where the push comes from the outside." The central principle of the school is education through real life: ". . . the closer the learning process comes to being a part of immediate daily life, the more permanent is the value of the resulting education." The work of this school is indorsed by some of the leading educators of the country. Arthur D. Dean, formerly chief of the Division of Trade Schools, Department of Education for New York, and now professor at Teachers College, contributed to the organization of this school and enthusiastically said, "and I am glad of it." At Lincoln-dale, New York, there is an agricultural school where the boy in his relation to real home and community life is made paramount. Here again, learning is made a by-product of living. In his chapter on "Play," Professor Dewey [2] refers to a number of schools, largely of kindergarten and lower grade type. Such schools are of the same class as those noted above, — they are striving to provide children with instruction in the activities common to their lives.

Private schools of a more advanced character are not without a very considerable influence in directing the tendency of educational changes. Only a few need be noted here to indicate the importance attributed to this education of a practical character, e.g., Lawrence Scientific School, Sheffield Scientific School, Rensselaer Polytechnic Institute,

[1] This school is located near Germantown, Pennsylvania.
[2] Dewey, J., *Schools of Tomorrow*, pages 103–131.

Worcester Polytechnic Institute, Massachusetts Institute of Technology, Pratt Institute, Tuskegee Institute. There are a great many others that belong to this class. Increasing recognition is being given to the value of the educational work done in such schools. In all of these the dominant purpose is the training of students to be efficient in their chosen lines of employment, but at the same time the development of those cultural traits that characterize the educated man and woman is not neglected. These schools contribute to the meeting of a real social and industrial need. They have also great influence upon the work in public schools.

Apprenticeship schools, connected with factories and other industrial establishments, may rightly be noted in this group of private schools. Such schools are not new. They date back to the fourteenth century in England. This was the time when craftsmen in towns entered guilds established for mutual protection. Preparation for practical employment was deemed important. The apprenticeships connected with those early guilds were the forerunners of the apprenticeship schools of today. These early apprenticeships under control of guilds and the later and present schools connected with private industrial corporations have had great influence upon the work of public schools. This effect is especially marked in Germany, where schools formerly maintained by merchants' associations, tailors' associations, tinsmiths' associations, etc., have been supplanted by the continuation schools (noted later in this chapter under "Public Schools"). Reports of labor statistics [1] and industrial education [2] in the United States show a very positive demand for a kind of education not found in public schools. "This revival of apprenticeship

[1] Report of the Bureau of Labor Statistics (New York), 1908.
[2] Report of the Commissioner of Labor (United States), 1910.

is proceeding, roughly speaking, along four main lines. The first is where the industrial establishment and the school system coöperate in the education of the apprentice, practice in the shop being supplemented and illuminated by cognate school study of mathematics, drawing, physics, chemistry, etc. The second is where the employer provides such school exercises within his own establishment. The third is where the industrial establishment recommends or requires school study without making any provision, direct or through affiliation, for such supplementary training. The fourth is where the apprenticeship training is practically concentrated upon a single process or range of processes for the purpose of securing specialized skill." [1] Authorities in industrial education seem to see in this apprenticeship education an answer to a real call for definite practical education. " In view of this changing attitude of both employers and labor unions, and in view, moreover, of the success of such experiments as that at Cincinnati and those upon many of the railroads, it would seem safe to predict that apprenticeship education will occupy an increasing place in vocational training, and that, in this development it will follow substantially two main lines, — one leading towards closer coöperation between public education and industrial establishments; and the other tending towards an intensive practical, but nevertheless broad, apprenticeship training conducted within the establishments themselves, by men who are educators as well as experts in their special fields." [1]

Thus it seems that schools in industrial establishments will either develop into a larger service or, as has been experienced in Germany, influence the public schools to undertake this work. Either procedure is in answer to the call

[1] Monroe's *Cyclopedia of Education*, article on " Apprenticeship and Education." This article contains a short but suggestive list of typical establishments maintaining schools.

of the public for an education more specifically in terms of the activities of social and industrial life.

By way of summary, it may be said that many private schools are instituted for the purpose of accomplishing a definite object not readily acquired in the traditional public school. That object is conspicuously the closer relation of school occupation to home and community life. While in most of these schools the " common branches " are studied, they are made subordinate to the problems of real life. The tendency seems to be to increase the relative emphasis upon the activities of out-of-school life. The experience of these private schools has unquestionably contributed much to educational thought and endeavor.

PROFESSIONAL TRAINING SCHOOLS

Another group of schools having much influence upon educational practice is that group connected with schools of education in universities and in normal schools. Space forbids a presentation of evidence from theory and practice in many of these schools. Those interested are referred to the course of study at Speyer School published by Teachers College in 1913; to the principles underlying Professor Dewey's school in Chicago reported in his *School and Society* (first edition), pages 116–119; to a course of study arranged at Farmville (Virginia) Normal School by Dr. C. W. Stone; to studies planned at Hyannis (Massachusetts) Normal School, reported in *Social-Industrial Education* by W. A. Baldwin. These four references are representative of many others.

PUBLIC SCHOOLS

Universities. Much complaint [1] has been made, though rather quietly, that colleges and universities have influenced

[1] See Report of United States Commissioner of Education, 1914, Vol. I, page 163.

very considerably the courses of study in lower schools, restricting such schools to preparatory work rather than to serving the immediate needs of individuals and of the community. But those who make such complaint are as ready as others to recognize that higher education tends strongly to provide for practical needs. The rapid development of university departments, generally called " schools," is evidence of this. The professional schools of law, medicine, and theology are of early foundation. Schools of agriculture, education, engineering, commerce, and journalism are comparatively recent. At a meeting of the trustees of Columbia University, January 3, 1916, a resolution was passed calling for the establishment of a school of business to be organized much as are schools of law, medicine, engineering, etc. Such schools have arisen in response to the demand of the community for greater efficiency in industry. The general college course, based upon the principle of " general discipline," does not suffice. There is an increasing demand that colleges give more attention to the vocational interests of the students.

Two other phases of higher education in relation to the more practical demands of society may be here noted.

College admission requirements are rapidly becoming more liberal. The credit for this movement may rightly be shared by higher institutions, which more and more recognize the educational values of industrial studies, and by the secondary schools, from which come frequent demands that higher institutions recognize that the lower schools have a social and educational responsibility besides that of preparing students for advancement to college work. A committee of the National Education Association, in 1911, held that " College admission should be based solely upon the completion of a well-planned high-school course." At this time Harvard and Chicago universities made radical

changes in their admission requirements. In explanation of the change at Harvard, the chairman of the committee on admission wrote: "The new Harvard plan does not prescribe what or how a boy shall study, but leaves the schools free to work out their own systems of education in their own way in accordance with the best interests of their pupils and needs of the communities in which they are situated." [1] Similar to this is the explanation from Chicago: "The University has been moved to make these changes largely because it appreciates and sympathizes with the increasing demand laid upon high schools to meet the important needs of their own communities." [1] Changes in many other universities are in the same direction. These changes are clearly in recognition of the increasing demands that the lower schools serve in a more direct and positive way the practical needs of the community.

In addition to the development of professional schools, which are strictly vocational in character, and the liberalizing of admission requirements, which is in recognition of vocational interests within secondary schools, universities add to the practical tendencies of the day by what is known as extension work. Through this agency universities endeavor to carry directly to the people already in vocational activity instruction applicable to their needs. It is an attempt to serve the people in a very direct and positive way. The University of Wisconsin is a conspicuous leader in this work. In the organization of this division of its work the university recognizes "a considerable class of persons who are unable to adjust themselves to the formal system of education." Effort is made to reach all classes of people in all phases of work and life: "those who must work for their living but wish to advance themselves in their own

[1] Quoted in Report of United States Commissioner of Education, 1911, Vol. I, pages 46–48.

lines while they work"; "the man — too old or unable to go to school, who yet needs more knowledge in his own profession or who seeks to change his vocation"; "the young man or woman who wishes to prepare for a business career"; "house-keepers and home-makers who wish to keep up with the times"; "practical men in business, the professions, and vocations." One of the four departments of the Extension Division is that of General Information and Welfare. Within this department is the organization of Community Institutes. These local institutes are the "result of a demand of Wisconsin's fathers and mothers, the business men and housewives, for information on problems of everyday life." "The 2731 new students who entered (correspondence courses) in 1912–13 and the 3055 new students who entered in 1913–14 recorded as vocations pursued by them 317 *different occupations* ranging from that of the apprentice boy cobbler and house-maid to business man, lawyer, and doctor."[1] Such service cannot but be suggestive of positive tendencies toward meeting real needs.

Secondary schools. When manual training and domestic science were introduced into our secondary schools some years ago, they were looked upon as only in part vocational. But these subjects were probably forerunners of manual training high schools, which were followed by vocational high schools, polytechnic high schools, and trade schools. Any clear line of demarcation between such schools is not made here; it is not important. In all of these emphasis is laid upon efficiency in commercial and industrial employment. One feature may be here noted. This is known as the "part-time coöperative school." This was first organized in 1906 at the University of Cincinnati. The

[1] For information see circulars from the Extension Division, University of Wisconsin.

coöperation is between manufacturer and teacher. Experience and instruction alternate in short intervals of time. School work is thus brought into the very closest touch with real life; it serves immediate needs. Similar plans have been put into use in Rochester and Buffalo, New York, and Fitchburg, Beverly, and Springfield, Massachusetts.[1] This points the way to a closer union of public schools and public service.

An expression of the purpose and spirit of these schools was given in the concluding sentence of the address at the dedication of the Albert G. Lane Technical High School of Chicago, in 1909: "Let us then loose the fetters of conservatism that bind us so closely to the schools of the past, and let us fairly meet the demand we can no longer evade."[2]

Of essentially the same character as these vocational schools are those known as continuation schools. The best types of these were to be found in Munich, Germany. All boys and some girls who had finished the elementary schools of eight grades were required to pursue their studies in the continuation schools. This meant two half days each week for three years. Employers were required to excuse these boys and girls on these half days. In Munich there were forty-six[3] continuation schools, designated according to the trade in which the student is employed. There were schools for druggists and merchants; dentists, photographers, jewelers; and schools for hotel waiters, barbers, and chimney sweeps. Provision was made for practically every employment into which boys and girls might go. Instruction was

[1] For further study of these vocational schools see Leavitt, F. M., *Examples of Industrial Education;* also, Reports of the Commissioner of Education.

[2] Year Book, 1910, page 51.

[3] See Kerschensteiner, G., *Organization und Lehrpläne der Obligator. Fach- und Fortbildungsschulen.* Since 1910 a number of other schools have been added.

directed to the practical activities of everyday life. In these schools the Three R's were used only as occasion requires in the vocational studies.

In the United States continuation schools are essentially for boys between the ages of fourteen and sixteen, though night schools, which may be classed with continuation schools, enroll many students much older than sixteen. These schools are day schools, and the boys are apprentices in various trades. The schools in Cincinnati afford an excellent illustration of this work. The plan for machine-shop apprentices includes not only the attendance of the boys upon the school one-half day each week, but also the visiting of teachers in their shops, " seeing the conditions under which they work, consulting with the foremen about their needs, and getting ideas and materials for guidance in teaching. This is an essential part of their work, for there is no handed-down course of study as yet. It must be worked out as they go along."[1]

Evening schools are essentially continuation schools. Young men and women who must work all day, but who have the ambition to advance in their own work or prepare for other employment, attend these schools. Such students are seriously handicapped in that at the close of a day's work there is too little energy for intellectual effort. But these schools meet a need keenly felt by these young people. The instruction given is virtually the same as that noted above in continuation schools. It serves everyday needs. The place which these schools have in the education of people who wish a training that functions in real life is indicated by the great extension of these schools.

There is a striking increase in the attention given to agricultural education. Here again is further evidence of the increasing demand for education of a practical sort.

[1] Leavitt, F. M., *Examples of Industrial Education*, page 225.

Here also is an illustration of how such practical education began in the higher educational institutions and has been extended downward into the public schools. The Morrill Land Grant Act of 1862 provided a great impetus to the study of agriculture in colleges. This act "donated to each state in the Union public land scrip to the amount of 30,000 acres for each senator and representative then in Congress, the income from the sale of which should be 'for the endowment, support, and maintenance of at least one college, whose leading object shall be . . . to teach such branches of learning as are related to agricultural and the mechanic arts . . . in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions of life.' It was clearly the purpose of the Morrill Act to establish a new type of college, and one that should be distinctly industrial. The objects in view were unique in another particular; namely, they aimed primarily at community development rather than the benefit of the individual student." [1] It was a quarter of a century after this act had been passed that agricultural education was introduced into the secondary schools of this country, though it had been introduced somewhat earlier in foreign countries. This education took an *advance step downward* into the elementary schools after another quarter of a century. By 1908 a number of states had added agriculture to the list of teachers' examination subjects and to the list of subjects taught in the grades. In each of the recent annual reports of the United States Commissioner of Education a chapter devoted to agricultural education shows the conspicuous advancement being made in this form of education. Special attention is called to the advancement made in the elementary schools. This notable progress is credited to the *interest* shown by the pupils in this subject. Such

[1] Monroe's *Cyclopedia of Education*, article, "Agricultural Education."

interest is, in all probability, due to the objective nature of the subject, to the fact that this subject relates to a very active occupation of people, and to the fact that agriculture is one large phase of the normal environment of pupils.

Elementary schools. Prevocational work in the grade schools is another indication of the attention given to practical education. This work in the grades is a product of industrial, vocational, and trade courses given in secondary schools and in higher educational institutions. It is another illustration of the *downward advancement* of practical education. This work is closely allied to agricultural education in the grades. It is not vocational, nor is it essentially introductory to vocational training, as the term "prevocational" might imply. Handwork and accompanying studies have been introduced into the grades largely to reach boys and girls to whom the traditional subjects have not appealed. The elementary industrial school [1] of Cleveland, Ohio, is a good illustration. Here approximately one half the time is devoted to handwork, which comprises such activities as mechanical drawing, freehand drawing, design, woodworking, cooking, sewing. Attention is directed to a variety of occupations in adult life with which such handwork is connected.

In this connection attention should be given to the Central Schools established in London in 1910. These were planned for pupils in the upper grades of the elementary schools. The character of these schools is well indicated in the report of the Education Committee.[2]

The country schools of Winnebago County, Illinois, have attracted considerable attention through the very practical

[1] See Leavitt, F. M., *Examples of Industrial Education*, pages 102–113; Hailmann, W. N., Bulletin of Bureau of Education, No. 39, 1913.

[2] Report of the Education Committee of the London County Council, March 1, 1910.

sort of education given under the direction of the county superintendent, O. J. Kern.[1] Country life is viewed as increasingly attractive. The country child has rights that must be respected. "The country child shall be put into sympathetic and intelligent relation to his environment. The country-school studies shall relate more to the life of the child, that his life may be rendered more significant. In an elementary way . . . the scientific discoveries will greatly modify farm work and country life when the great mass of farmers appreciate their value; and the time for this appreciation to begin is when the future farmer is a child at school." Attention is given to garden work, boys' experiment clubs, educational excursions, indoor art, library reading, and other such activities and interests found in normal life out of school.

In a goodly number of public elementary schools changes are being made in the direction of giving more attention to the affairs of everyday life. Gary, Indiana, has attracted much attention, more by the economic organization than by any great change in the character of the curriculum. However, the daily occupations of pupils are much more kin to real life than in the traditional school. A variety of shops afford opportunities for handwork according to the pupils' interest and ability. Such shop work and related studies have much influence in bringing the Three R's into closer relation to the activities of community life. Some ward schools in Indianapolis and some in Chicago are good illustrations of this same tendency. In Batavia, Illinois, a few years ago, an attempt was made to transform one of the traditional subjects, arithmetic, into a study of the quantitative phases of local affairs. This movement is looked upon as "Vitalizing Arithmetic."

The rapid development of the junior high school move-

[1] See Kern, O. J., *Among Country Schools.*

ment[1] is a further indication of this tendency to make public school work more closely related to life outside of school. This junior high school seems to be organized, on the one hand, to expedite the progress of students who look forward to higher study; on the other hand, to provide elementary science and vocational studies for pupils who will soon withdraw from school and enter industrial employments.

Credit for home work is one of the recent forms of recognizing the call for closer relation of school and home.[2] Some schools allow credit toward graduation for milking the cow, caring for the horse, splitting kindling, sweeping, dusting, caring for the baby, brushing the teeth, attending church, etc. There is as yet no indication that such activities are incorporated into the curriculum as topics for study. But the crediting of such work at home as contributing to a boy's or a girl's development is a step toward the reorganization of the curriculum to include studies of real life.

The New York Orphan Asylum at Hastings-on-Hudson is a public institution quite different from the public schools noted above. Under the direction of Superintendent R. R. Reeder, emphasis is given to the interests and activities of the community. Mr. Reeder points out that the traditional curriculum is out of touch with the hum of modern life, and adds, " there is only one remedy for this situation and that lies in the direction of vocational training and a curriculum that takes account of what is going on in the community and spends less time on remote interests and abstractions." [3]

In closing this section on public schools attention should be directed again to the many school surveys that have been

[1] See Report of United States Commissioner of Education, 1914, Vol. I, pages 135–157.

[2] Report of United States Commissioner of Education, 1913, Vol. I, pages 134–136, and reports of other dates.

[3] Reeder, R. R., *How Two Hundred Children Live and Learn*, page 120.

made in recent years. Probably one of the most frequent criticisms made is that school work is not in close touch with the social and industrial life of the community. But the illustrations cited above indicate changes that are taking place in response to both the social demands and these survey criticisms.

Sufficient illustrations have been given to indicate how public schools are responding to social changes. These changes must not be interpreted as representing the rank and file of public school work. Far from it. They must be regarded as movements under the guidance of strong, progressive leaders and in communities favorable to school changes according to social changes.

MISCELLANEOUS EDUCATIONAL AGENCIES

Other indications of this tendency to respond to demands made by social changes are found in a variety of forms more or less closely connected with school work.

Textbooks. Textbooks indicate this tendency. In *Everyday Arithmetic,* "The work is arranged so that there is a systematic development of number concepts, and of the fundamental facts and processes, but, in approaching the formal work, the book makes an important departure from current practice. The problems and exercises are grouped by situations taken from actual experience, so that a child meets number vitally related to his home and school interests. The fundamental facts and tables are taught through games and plays; the fundamental processes, largely through school and community interests." [1] In pointing out the nature of the work for Grades VII and VIII, provided in another book, the authors say: "The preceding books have laid emphasis on home and school interests: this book

[1] Hoyt, F. S., and Peet, H. E., *Everyday Arithmetic,* Preface in Book Two.

reaches out into the world of business, industry, and civic affairs." [1]

In *Business Arithmetic for Secondary Schools*, the author declares: "The use and application of number vary with the changes and development of our industrial, commercial, and social relations. The arithmetic of today is not the arithmetic of ten years ago." [2]

In the subjects of geography and history very significant changes are indicated. *The Wheat Industry* is the first of "The Industrial Series." [3] This series, the editor states, "is designed for the purpose of making use of industrial studies in education. . . . That the natural resources are of fundamental importance in shaping industrial development is generally understood. It is likewise known that the industries based on the resources have relations to the life and welfare of the people." [4] A few chapter titles indicate the character of the subject matter contained: "Cultivation and Growth," "Harvesting," "Threshing," "Transportation and Storage," "Production," "Marketing," "Milling." The authors point out the relation of this work to other school subjects: geography, agriculture, language, and history. Arithmetic is not included, though such chapters as "Harvesting," "Transportation," and "Marketing" necessitate much excellent arithmetical work.

There is a striking tendency at present to present elementary science as a study of the commonplace environment of people. A teacher [5] strongly in favor of this movement very appropriately named one of his courses, "The Science of Familiar Things." Quite typical of the purposes of a number of recent books on elementary science is this:

[1] Hoyt, F. S., and Peet, H. E., *Everyday Arithmetic*, Preface in Book Three.
[2] Thurston, E. L., *Business Arithmetic for Secondary Schools*, Preface.
[3] Edited by G. E. Condra.
[4] Bengton, N. A., and Griffith, D., *The Wheat Industry*, Preface.
[5] C. Stuart Gager, now Director of Brooklyn Botanical Gardens.

" . . . to develop a more usable fund of knowledge about common things, and a more scientific attitude in interpreting common problems." [1] A number of such books are now being published. They indicate a marked emphasis on the study of the practical affairs of everyday life.[2]

Publications on practical affairs. As an illustration of a great quantity of publications dealing with practical affairs may be noted the monograph series under the direction of the Joint Committee of Physics of the National Education Association. These monographs are written by the technical staffs of manufacturers in coöperation with this Joint Committee of Physics. These monographs are " intended to convey to teachers the point of view of men of affairs as to the principles and facts worth teaching to students. . . ." " Mechanics of the Sewing Machine," " The Edison Storage Battery," " Elementary Electrical Testing " are titles of some of the monographs.[3]

Motion pictures. Aid in education has been found recently in motion pictures. This innovation unquestionably contributes much to objectifying instruction and to interesting young people. But the very fact that these pictures are, in the main, representations of activities tends strongly to present to pupils industrial phases of life. For example, motion pictures in the realm of agriculture include such subjects as: " irrigation works on new farms, clearing the land by donkey engines, blasting tree stumps and rocks with dynamite, sowing wheat, reaping, threshing, etc., potato culture, cattle ranching, rice culture, growing stalks, transplanting. . . . " [4] This new invention makes possible

[1] Caldwell, O. W., and Eikenberry, W. L., *General Science*, Preface.

[2] Hessler, J. C., *The First Year of Science;* Hunter, C. W., *A Civic Biology;* Peace, C. A., *A First Year Course in General Science.*

[3] Copies may be secured of J. A. Randal, Pratt Institute, Brooklyn, N. Y.

[4] Report of United States Commissioner of Education, 1913, Vol. I, pages 587–597.

a more effective method of teaching, but of more significance is the response to the demand for instruction relating to the industrial occupations of men.

Junior Civic League. Under joint direction of the public schools of Lincoln, Nebraska, and the Lincoln Commercial Club is a Junior Civic and Industrial League. The purposes of the organization are: "(1) to study the civic and industrial life of the city by first-hand observation; (2) to learn what opportunities the industrial life of the city offers to young men; (3) to teach its members to think seriously and wisely concerning the various vocations studied; (4) to assist in preparing its members to take an active and efficient place in these vocations; (5) to connect more closely the work of the public schools with the life of the community; (6) to teach its members to aid effectively in meeting the civic needs of the community and to assist every civic institution in promoting the general welfare of our city."[1] A league with such purposes is answering social demands not provided for in the work of the public schools.

Service of the school plant. The wider use of the school plant is another illustration of the tendency under discussion. The community is coming to realize that large investments in the school plant are not in the interests of economy unless that school plant contributes to the life of the community in ways other than instruction in the Three R's. In pursuance of this policy school buildings and grounds are being used by the adult population for various civic purposes. And children, too, are enabled to use playgrounds, libraries, etc., out of school hours and for purposes other than school exercises.[2] This social service of the school plant will have

[1] Typewritten statement issued by the public schools of Lincoln.

[2] See Perry, A. C., *The Wider Use of the School Plant.* Also Report of United States Commissioner of Education, 1914, Vol. I, page 455.

an unquestionable influence upon the curriculum, which will become more social in its nature.

Legislative enactments. Action taken in recent years in Congress and in the legislatures of many of the states supplements the response given to the call for education of a practical sort. Reference can be made here to only a few typical legislative enactments.

In 1914 Congress passed the Smith-Lever Bill. This act provides an initial sum of $480,000 to be distributed among the states for agricultural education. To this initial amount there is an annual increase so that after eight years the funds available amount to $4,580,000 annually.[1] It is expressly provided in the act that the character of the work shall consist of "instruction and practical demonstrations in agriculture and home economics." "In the discussions of this bill both in Congress and throughout the country, great emphasis has been laid on practical field demonstrations."[2] The Smith-Hughes Act provides an initial sum of over one million dollars to be distributed among the states in the proportion that their rural population bears to the total rural population of the United States, not including outlying possessions. This initial sum increases each year until in the year 1926 the sum of $6,000,000 is reached.[3] This, however, is available only in case the state or local community expends an equal amount. This act is intended to promote vocational education in agriculture, home economics, trades, and industries.

In Indiana, in 1913, a state system of vocational education was enacted. The purpose of this law was to provide vocational instruction for the more than eighty per cent of

[1] Digest of State Laws relating to Public Education, Bureau of Education Bulletin, No. 47, 1915.

[2] Circular letter from the office of the Assistant Secretary of the Interior.

[3] For a good summary of this law see *School Arts Magazine*, Vol. 6, pages 168–169, 1917.

young people in the state, who from choice or necessity find their life occupations in various industrial activities.[1] One section from the law will illustrate its intention: "Elementary agriculture shall be taught in the grades in all town and township schools; elementary industrial work shall be taught in the grades of all city and town schools; and elementary domestic science shall be taught in all city, town, and township schools." [2]

"Montana's new school code makes it obligatory for school districts of 5000 or more inhabitants to maintain at least one manual training school. . . . In districts having 10,000 or more population special courses for direct vocational training must be established, to which pupils over 12 years of age who have completed the fifth grade may be admitted." [3, 4]

SCHOOL PRACTICE AND SOCIAL AIMS

Sufficient examples have been presented to indicate present tendencies. This chapter may be concluded with a few brief statements.

A considerable number of these changes are in process without specific reference to the curriculum. Efficiency in what people are doing is the center of thought. The emphasis is upon the activities of real life wholly aside from the school. Thus, in the schools conducted by the Santa Fé Railway system the effort is to produce efficiency in the employee. In the Boy Scout movement attention is given directly to achieving great things for the boys or for others

[1] See Book, W. F., First Annual Report on Vocational Education in Indiana, for discussions of the initiation of this work (1914).

[2] Quoted in Report of United States Commissioner of Education, 1913, Vol. I, page 907.

[3] Report of United States Commissioner of Education, 1913, Vol. I, page 909.

[4] For further illustrations of such legislative enactments consult chapters on Educational Legislation in Reports of the Commissioner of Education.

through the boys. The George Junior Republic aims directly at the everyday living of its junior citizens. In trade schools emphasis is given to the training of efficient workers. Results are measured in terms of efficiency later. The adult population, engaged in industrial life, want such results. This explains how, in Minneapolis, a committee of sixty business men was organized as a means of obtaining closer articulation of the public schools with the real needs of the community life.

On the other hand, a considerable number of the changes noted in this chapter are in process with special reference to the public school curriculum. In the normal school at Farmville, referred to above, effort is made to find centers of interest in real life that can be used in school work. In *Everyday Arithmetic* problems are taken from real experience to serve as means of improving instruction in arithmetical processes. Just such is the effort in many schools to " vitalize " the subjects of the curriculum. In all such efforts there is used a bit of commonly accepted psychology: a secondary interest is reached through a primary interest. In all this the essential purpose is that of effecting more in the Three-R subjects. Method is the chief problem. Results are to be measured in terms of the Three R's, not in terms of real life.

These two distinct views may be found in the changes noted in this chapter. In these two views is a conflict which seriously retards progress in educational endeavor. On the one hand, people are looking more and more for a greater practical outcome of school work. This is the social goal. On the other hand, people see in the traditional Three-R subjects the only content for school work. But the social goal is not in terms of the Three-R subjects.

Only when the school curriculum becomes formulated in terms of the social goal as found in real life will this conflict

disappear. In the meantime all the educational changes suggested by the examples given in this chapter are clearly showing a tendency to bring school work into closer relation with normal life outside of school.

Supplementary Readings

BALDWIN, W. A. *Industrial-Social Education*, pages 15–52.

BOURNE, R. S. *The Gary Schools.*

BURRIS, W. P. *The Public School System of Gary, Indiana.* Bulletin of the Bureau of Education, No. 18, 1914.

CUBBERLEY, E. P. *Rural Life and Education*, pages 131–159, 328–347.

DAVIS, J. B. *Vocational and Moral Guidance*, pages 112–118.

DEWEY, J. *Schools of Tomorrow*, pages 1–316.

GRAVES, F. P. *A Student's History of Education*, pages 397–440.

KERN, O. J. *Among Country Schools*, pages 129–200.

KERSCHENSTEINER, G. *The Idea of the Industrial School*, pages 89–110.

LEAKE, A. H. *Industrial Education*, pages 43–92.

LEAVITT, F. M. *Examples of Industrial Education*, pages 95–234.

PERRY, C. A. *The Extension of Public Education.* Bureau of Education Bulletin, No. 28, 1915.

—— *Wider Use of the School Plant.*

REEDER, R. R. *How Two Hundred Children Live and Learn*, pages 117–133.

THOMAS, F. W. *The Apprentice Schools of the Santa Fé Railway System.* National Education Association, 1914, pages 175–185.

General References

COOLEY, E. G. *Vocational Education in Europe.*

GEORGE, W. R. *The Junior Republic.*

GRAVES, F. P. *A History of Education* (in modern times), pages 320–396.

KILPATRICK, W. H. *The Montessori System Examined.*

LAPP, J. A., and MOTE, C. H. *Learning to Earn.*

LEAKE, A. H. *Industrial Education.*

LEAVITT, F. M. *Examples of Industrial Education.*

MAHONEY, J. *American Citizenship in the Educational Surveys.* Report of United States Commissioner of Education, 1914, Vol. I, pages 563–596.

MONTESSORI, M. *The Montessori Method.*

PARKER, S. C. *The History of Modern Elementary Education.*

PAULSEN, F. *German Education,* pages 169–301.

Reports of United States Commissioner of Education under topics: "Educational Legislation," "Vocational Progress," "Progress of City School Systems," etc.

SADLER, M. E. *Continuation Schools in England and Elsewhere.*

Statement Outline for Chapter Eight

The traditional school stresses preparation for higher schools or for life.
- The adult viewpoint favors preparation.
- The character of school subjects is preparatory.
- Promotion of pupils is based upon a preparatory curriculum.
- Preparatory work continues in spite of revelations of child study.
  - Time of childhood is counted of little value,
  - Motive is found in anticipation,
  - Economy is secured in preparatory effort.

In the interests of the majority of the pupils school work should meet present needs.
- Most children leave school before the traditional preparation becomes effective.
- School work should be elementary rather than introductory.
- Preparatory courses that do not prepare are costly.

The boy and the girl are concerned with the present.
- They live in the present.
- Their motives are found in the present.
- Children's activities are in the present.

Homes and communities need the immediate coöperation of the school.
- The school should help parents:
  - in directing the play life of children,
  - in developing in children the spirit of helpfulness.
- The school should help the public:
  - in appreciating the spirit of the gang,
  - in providing better direction through wholesome occupation.

Efficiency now prepares for efficiency later.
- Provision must be made for both present and future.
- There are evidences of transfer of efficiency
- Efficiency rests upon:
  - Analysis of the problem as personal,
  - The spirit of initiative,
  - The ability to attack a problem,
  - Persistency in application,
  - Tentative attitude towards results.

CHAPTER EIGHT

The Curriculum and Present Needs

PRINCIPLE ONE

The curriculum should contribute primarily to enabling boys and girls to be efficient in what they are now doing, only secondarily to preparing them to be efficient later.

The purpose of elementary education should be: *To help boys and girls do better in all those wholesome activities in which they normally engage.* This is the fundamental problem maintained throughout this book and is the natural sequence of the emphasis placed, at the very outset, upon the child viewpoint. This purpose of elementary education implies an unqualified reference to the immediate present. This is quite at variance with present school practice and is, therefore, liable not to be readily accepted. The purpose of this chapter is to set forth the claims of the child, the home, and the community that school work be directed primarily in the interests of the present; and to show how efficiency in the present includes adequate provision for the future.

THE TRADITIONAL SCHOOL AND PREPARATION

The adult viewpoint. Present educational practice, at least within the elementary school field, is clearly of a preparatory nature. Teachers and school officials — and indeed most of the adult population — look upon the child as one who is struggling to develop into the position of the adult. Pursuant to this view, the school officials arrange the studies for the young boys and girls. The adult emphasizes the importance of foresight and preparedness.

"Lack of foresight" is given as explanation for many a failure. Ability to succeed depends very frequently upon

that foresight which prompts one to make adequate preparation. A young teacher fails in discipline because she has not the foresight into the almost inevitable antics of the overactive boy in the presence of an underactive school curriculum. She has not prepared in advance to meet just that situation. She fails in instruction because she has not foreseen the difficulty of awakening a drowsy, inactive boy in the study of grammar, which makes no appeal to such a boy. In neither case did this teacher adequately prepare for these trying circumstances. A preacher fails because he has not foreseen the demands made by an industrial community. A man in the oil refining business fails because he has not foreseen the crushing power of large monopolies. An army fails because its leaders have not foreseen the strength, the purpose, and the morale of the enemy. Lack of foresight into conditions and needs means inadequate preparation to meet such conditions and needs. This explanation of frequent failure is so general that emphasis has been given to preparation in school for contingencies after school. Thus pupils are constrained to live and work in anticipation of the next grade and life after school. They must ever be preparing.

In his criticism of the curriculum in the New York City schools, McMurry notes that evidently one article in the educational theory in those schools is: "The time for the pupil to use his knowledge acquired in school is the distant future; not now." The critic later adds: ". . . the belief that the content of curricula should be selected with reference to the distant future accounts for the want of subject matter that appeals *now* to children, and, therefore, that affects their present conduct." [1]

Whatever be the reasonableness of this preparation for the

[1] McMurry, F. M., *Interim Report, Committee on School Inquiry, City of New York*, 1911–1912, pages 43, 115.

distant future, the nature of childhood and youth rejects such a principle as out of place within the curriculum of the elementary school. " There is danger that civilized man will lose the power of repose, of the ability to enjoy the present good in his eager strivings for the future." [1] This statement is still more applicable to children than to adults.

School subjects preparatory. The traditional curriculum is chiefly used as a means of preparation for succeeding grades and later life. Since Spencer's day, and probably before, schooling has been regarded as a preparation for complete living.

This preparatory character of the curriculum is very noticeable when we examine the various school subjects. The school " reader " is usually used as a means of preparing to read later. The alphabet is empty save as a step in the construction of words that have meaning. Yet the letters are taught by most parents who attempt to help their children, and by most teachers in the first grades. Diacritical marks are yet more meaningless in themselves. They are taught to children with the avowed purpose of preparing them to be independent readers later.

The " stories " in the primer and first reader contribute practically nothing of immediate value to the pupil. These are not the narratives that children talk about, tell to their parents, ask to have again and again. The continuous story, or one that has sufficient length to provide for considerable development of action, appeals to children, and is quite in contrast to the short and countless " lessons " in most readers. The supplementary reader has, in rather recent years, found its way into the school. These readers contain the interesting, continuous story, but they have not supplanted the old reader, and this failure is surprising. Spelling, which has been — and yet is — so closely associated with

[1] Spencer, H., quoted by Bradley, J. E., *Work and Play*, page 52.

reading, is nominally a tool in reading, but is virtually of no service in the reading.[1] However, where spelling is taught, it is commonly in anticipation of using such spellings later in composition or in reading.

Space does not permit an analysis of school texts in arithmetic, language, grammar, geography, history, manual training, etc. It will be interesting, however, to the student of this problem to examine various school texts to note the extent to which the idea of preparation is predominant. He should note what an author states in the preface as his purpose; how preparatory is the character of the contents; how preparatory is the arrangement of topics, e.g., common fractions prepares the student for decimals, and this in turn prepares for percentage. He should note further how the contents are divided into portions suited to succeeding grades.

Preparatory character of school organization. The usual system of classification and promotion is based upon the preparatory character of the traditional curriculum. The completion of fourth-grade topics is an essential preparation for the successful pursuit of fifth-grade work. A pupil may thus prepare for promotion to the next higher grade by completing successfully the work of the grade preceding. Thus, each grade is a prerequisite of the grade that follows. The pupil is led to regard his work as of significance only as far as its completion prepares him for other work.

Preparatory work and child nature. Current practice supports this preparatory work in spite of the revelations of child study. It is claimed that the time of childhood is of little value. This period of life may well be spent in merely getting ready for later life. But those who make this claim tacitly assume that children have nothing to live for dur-

[1] It has been clearly demonstrated that first-grade pupils can read well without knowing the names of the letters.

ing these early years. They value child life only in terms of adult accomplishments. But a life closed at the age of twelve cannot be said to have been lived in vain. The values of life may be measured in other terms than adult accomplishments. There is serious danger that, in our anxiety for future accomplishments, we underestimate time values with children.

It is further claimed that a strong motive is supplied by "dealing in futures," in thus preparing for later life. More work and better is then accomplished. But children, as a rule, cannot look forward far, and see situations that attract and impel to action. Such vision is based on experience. How early in life can young men wisely choose their life occupations? Adults have had much experience and too generally overlook this deficiency in the young and so mistake their capabilities. Motives are essential, but effective motives for pupils may be found to far better advantage in the immediate present. In this connection it must be said, with some emphasis, that *the efforts which teachers put forth to induce pupils to take hold of school work are good evidence that motive found in preparation for the next grade is not so strong as is usually supposed.* The need of specific preparation for a definite occupation supplies many a young man with a strong motive for close application; but such is not the case with immature children.

Economy is claimed on the ground that the preparation needed is largely of a mechanical nature — the acquiring of the tools of study — and this mechanical work may be better accomplished by the immature mind. Youth is the time for memorizing; youth is the time for fixing habits of accuracy, speed, form. But psychological investigations have not yet given evidence that the child memorizes more readily than the adult or that he retains to better advantage.[1] Some

[1] Thorndike, E. L., *Educational Psychology*, Vol. III, Chapter 12.

habits are permanently fixed in youth, but children's activities that develop into habits are much more strongly influenced by present conditions than by future considerations.

Time of childhood is of value to both children and adults. Children live in their present and contribute at once to the life of the home and community. Motive in present achievement is stronger with children than motive in future contingencies.

THE MAJORITY OF PUPILS AND PRESENT NEEDS

Education before withdrawal from school. Public education should respond to public needs. In recent years great progress has been made in meeting the needs of the industrial classes through what has been termed "industrial education." Yet comparatively few of these industrial classes are reached even by this means, and the masses of the American population are not included in these industrial classes. In recent years public education has grown popular. Enrollment and attendance has greatly increased. Children remain in school longer and advance to higher grades than they did twenty-five or even ten years ago.

But in spite of these hopeful indications it must be said that a large majority of our pupils complete but a small portion of the course of study open to them. Compulsory attendance laws in most states call for from six to eight years of schooling. But this law is frequently not enforced: in many places it cannot be enforced. Thus many pupils of school age are not in attendance. Even where the law is vigorously enforced or where there is no attempt to violate the law, many pupils fail to make normal headway. Retardation tables show that many pupils fall behind the progress of their grade.[1] This means that comparatively few acquire the training that is planned as a preparation for living.

[1] See Chapter Three and the studies in retardation referred to.

Elementary and introductory courses. In addressing the Scientific Association at the University of Missouri in 1911 President A. Ross Hill maintained that elementary courses in science should be treated as though the students were to take no more science courses. This is in striking contrast to the idea which determines so many of the " introductory " courses in colleges and universities. " Introductory " courses seem planned primarily as preparation. The student who does not advance further loses, of course, what he fails to take, but worse, he fails to get much from what he has already taken. Preparation for that which one does not reach is largely, if not wholly, lost.

In the elementary schools which use the traditional curriculum practically all of the work consists of " introductory " work rather than " elementary " work. Our whole educational scheme is a sort of hierarchy, in which each lower grade or study pays due homage to that next above. If the upper limit of this preparatory arrangement were reached by even a majority of our school population, the situation would be tolerable. There is not a real stopping place planned in the public school system, from the elementary grades to the completion of the university (except in the professional schools). Each grade introduces to the next higher; the completion of the elementary school serves as a popular dropping-out place for many, but in recent years school men are making a strenuous effort to " bridge the gap "; the high school with its fifteen units on the accredited list is essentially a " preparatory " school. The public school is thus, as Professor Thorndike once aptly said, " a selective agency " which acts well in testing all and selecting those few who are prepared to go higher in this educational scheme.[1]

All grades and all classes in the elementary school should be strictly elementary as opposed to introductory. All

[1] Compare Draper, A. S., *American Education*, page 278.

phases of the work should be arranged for the pupil as though he were to go no further. All problems studied in the elementary school — this means all units of subject matter arranged in the curriculum — should be of present value to the pupils irrespective of their introductory or preparatory service for a later time. If pupils knew their rights they would justly claim this character of work in school. It is, of course, difficult, if not impossible, to see arithmetic in this light. Reading lessons, grammar, and geography would be likely to lose some of their traditional prestige. It may be briefly pointed out here that the essential nature of language, grammar, arithmetic, etc., is the "general notion," that is, principles for application later, as occasion requires; for example: five times seven are thirty-five; the dividend is equal to the divisor multiplied by the quotient; the verb must agree with its subject in person and number; Albany is located on the Hudson River. Those subjects are therefore of a "preparatory" character. Thus the contention made here for work that is *primarily* without a future reference calls for a substitute for the usual "common branches." This, therefore, is a bold contention, but it lies at the very basis of the curriculum proposed in this volume. If the Three R's are essentially preparatory and if immediate needs are allowed priority over future needs, a change in the nature of the curriculum seems imperative.

Preparatory courses not economical. But further, preparatory courses that fail to retain more than comparatively few pupils until they reach that stage for which they are being prepared cannot be considered effective. The present arrangement of the curriculum, providing in the early years work that is dominantly preparatory for later study, is not in the interests of good economy. "The Money Cost of the Repeater" [1] is an attractive title of a short chapter of con-

[1] Ayres, L. P., *Laggards in Our Schools*, pages 89–98.

siderable importance. In his study of conditions in fifty-five cities, Ayres calculates that the cost of the 311,985 repeaters in those schools is 15.4 per cent of the total cost of the schools of those cities. This amounts to $13,705,464, a sum that startles the taxpayer when he understands that all this could have been saved if those three hundred thousand pupils had only kept up in their grades.

But carry this "money cost" a step further. That expense for repetition might be regarded as a good investment if it could be shown that such repetition increased the efficiency of the repeaters to any considerable extent. Money cost is the more extravagant as the results are less effective. Accepting as valid the contention made above that the traditional curriculum usually followed in public schools is essentially of a preparatory nature, investment becomes less economical as the pupils fail to reach beyond the preparatory stages. Here is indeed a money cost quite usually overlooked. New York City alone spends more than fifty million dollars annually in her public school system. It is impossible to calculate the amount of waste in this sum. No adequate data for such a problem are available. Such a calculation must not be upon the number of repeaters, but rather upon the number of those who fail to reach that situation for which the course of study is planned to "prepare for complete living."

Because it is comparatively easy to calculate the money cost of the repeater we are quite content with such an analysis of the situation. There is now in evidence no means of determining the cost of educating pupils for positions to which they never attain; and this disturbs few. We are too readily contented with arithmetical accuracy but too tardily discontented in the face of significant situations that do not readily admit of arithmetical measurement.

Professor Charles A. Beard has written a valuable book

entitled *American Citizenship.* This was prepared for first year high school students for the reason " that a large number of pupils drop out after the first year, and if the purpose of instruction in civics is good citizenship, the subject should be placed in the course of study at the point where the most students will be reached." [1] Just this is the important point in good economy in the elementary school as well as in the one subject of civics in the high school. It is educational economy as well as financial economy to teach our pupils the things really needed *now*, rather than spend so much money and energy upon preparing the masses for what only the select few reach.

But Ayres wisely closes his discussion of money cost by asserting, " The effect of retardation is only slight in making school expenditures greater, but potent in making their effectiveness painfully less. To reduce retardation would greatly enhance educational efficiency rather than effect a financial saving." [2] To expend school funds on the masses but for the profit of only the classes who, by the "selective agency " plan, are enabled to make use of the preparation given, is bad economy. But there is a yet worse economy apparent when account is taken of the educational effect upon the masses who are not to profit by the things " higher up." This educational effect is apparent in most public schools and throughout the laboring classes in any community. It is this: English grammar and English composition are not productive of immediate profit, and the interest of the masses in study is thereby lessened. Most of the work in geography leads to no specific outcome, and so the masses turn from study to everyday life. The masses who cannot advance far in study are led to disparage all study when the curriculum before them concerns primarily

[1] Beard, C. A., *American Citizenship,* Preface.
[2] Ayres, L. P., *Laggards in Our Schools,* page 98.

only the few who will study further. The "selective agency" scheme is uneconomical for the masses.

THE INDIVIDUAL PUPIL AND PRESENT NEEDS

Children and the present. If the boy or girl were consulted as to school work he would suggest little of the past or the future for study. He lives in the immediate present. He knows little of the past; he forecasts little of the future. He applies himself assiduously to his occupation for the time. He wastes no time in regrets for what might have been; he is too much engrossed with present profit to himself to question as to later results. He is naïvely wrapped up in his own present environment, an environment very rich for him now, richer and more extensive as his experience increases.

But why consult the boy or girl in school about what shall be taught him? Has not racial experience developed what the present generation should acquire, and have not men of varied experiences studied into the future sufficiently to determine what is good for the young? An affirmative answer seems, at first, very plausible; but such an answer is set aside by the favorite thesis in this whole discussion: *the great purpose of the elementary school is to help boys and girls do better in all those wholesome activities in which they normally engage.*

The nature of the boy and girl must be consulted if the curriculum is wisely selected and organized. The curriculum must be made to suit the boy and girl, not the boy and girl shaped to the Procrustean curriculum.

Motives in the present. In this connection a word on children's motives is important. Further discussion of this will be presented in Chapter Eighteen. Much emphasis has been given in recent years to the importance of using children's instincts, their interests, their feeling of need, in short,

their motives. In their own real life children's motives are strong and they are many. There is a strong motive at every normal turn. Here motive is merely the clear recognition of a situation and the importance of acting so as to adjust oneself better to that situation. Any subject matter must be used by the pupil exactly as a hoe or spade is used by the farmer: it is an instrument by which he does what is wished. It is impossible, then, if we are conscientiously consistent, to arrange first our "instruments" — the set lesson units — and then create situations for the purpose of building up motives. Motives are thus made subordinate to instruments.

Children are naïve if allowed to be. They are natural, not artificial. They normally meet real needs, they experience genuine motives. Situations artificially constructed by adults for the purpose of giving pupils "motives" for attending to previously prescribed tasks are not in harmony with the real nature of children. This artificiality is understood by the child sooner than teachers or parents realize. The teacher's difficulty is then very considerably increased.

Motives may be operative in the immediate present or guide action with reference to a later time. The traditional curriculum is almost universally recognized as a plan of preparation for later use. Motives that lead to a study of arithmetic, for example, are to be found in the recognition of a later need for such subject matter. We may *seem* to appeal to present motives when we construct an artificial situation calling for certain knowledge of arithmetic.[1] But if the situation is artificially constructed by the teacher and is not found in the normal experience of the pupil, the need is not a *real* need. Motive is consequently artificial and has a reference only to later possible needs. The child's motive must be found in his recognition of a real need in the present.

[1] Compare Charters, W. W., *Methods of Teaching*, pages 146–184.

Activity in the present. Boys and girls of elementary school age are intensely active. The period of infancy, including more than the school age, is the period of growth, and this growth is dependent upon activity. In spite of the too common attempt of the adult to repress the child, his activity will out. Repression must yield to expression. Without this strong tendency to activity the development of the child would be hopeless. It is the active pupil, even if mischievous, that promises most. Advocates of the culture-epoch theory support this position and call attention to the interest of children in imitating the activities of primitive men — children enjoy tomahawking and scalping excursions. But one need only observe, on streets where children play, how they enjoy "dressing up" and acting, not in representing primitive peoples or racial experience, but merely in being *more active*. Feathers, paint, dagger, and helmet serve as an "extension of personality" and incite to increased activity. In the same way adults' clothing, false faces, paper hats, and the like incite children to a parade and other forms of active expressions. A dull monotony is the impression which the usual school makes upon the pupils; monotonous and dull largely because of the lack of childlike activity inherent in the regular work of the school. Free play at recess, boisterous as it may be, cannot compensate for the repression practically necessitated by the traditional curriculum.

Many writers and practical school men tacitly assume that the traditional school subjects must be taught. The problem then becomes one of method of infusing into the work such activities as will meet children's needs and serve as motives in inducing them to "take hold." This procedure is inadequate.

Child nature insists upon present interests — for the child. Appreciation of the past and insight into the future

vary with the character and the amount of experience. The elementary school pupil has had but little experience. His interests are thus largely limited to the present. Children have motives in the normal course of their lives — many motives, and rich motives, but practically all these motives relate to present needs. Children are intensely active, not in searching out the past nor prospecting as to the future, but in adjusting themselves to their own increasingly complicated and increasingly interesting environment. The curriculum outlined in Chapters Thirteen to Sixteen is planned to meet child nature by providing activities and studies of activities that constitute the real environment of children of elementary school age.

PRESENT NEEDS IN THE HOME AND COMMUNITY

Relation of school and home. Boys and girls need help in their activities at their homes and in their communities. So also, the homes and communities in which children live need the assistance of the schools in directing these young people. This need is scarcely questioned, but the immediacy of this need is quite generally overlooked. The stress of the traditional school upon preparing pupils for the exigencies of later life is only an expression of the custom of thinking by the people. The adult looks forward in the interests of children and communities later, and quite overlooks present conditions. Present needs are slighted.

A great deal is being said and written on the importance of bringing the home and the school more closely together. "What can be done . . . to bring the school into closer relation with the home and neighborhood life — instead of having the school a place where the child comes solely to learn certain lessons? What can be done to break down the barriers which have unfortunately come to separate

the school life from the everyday life of the child? "[1] Dewey here presents one side of this closer union; that is, the bringing of school life nearer to out-of-school life. But the more usual theory and the more evident practice are on the other side; that is, the bringing into the school such of real life as may be adapted to educational work. The school is made central. One rather conspicuous organization contributing to this policy is the mothers' club. This organization is clearly independent of the school but coöperates with teachers and officials. The real intent in these mothers' clubs is unquestionably good. However, there is a serious weakness in evidence, largely due to a misunderstanding as to the real relation between school and home, and the possibilities of service on the part of such clubs. The International Congress on Home Education has expressed much that is in keeping with the work of the mothers' club. Instead of looking upon the school as in need of their help, these parental organizations should point out to the school its opportunities to help the home and community. The school is in danger of atrophying by living within itself rather than by serving the interests of home and community.

The most practical purpose of the elementary school is *to help boys and girls do better in all those wholesome activities in which they normally engage,* quite aside from the school. We must not, of course, expect too much of the school in improving the home life of children. Teachers rightly complain of the difficulty of doing much in the development of good habits in children when school influence is limited to such a small amount of time compared with home influence. But this disproportion of time only increases the opportunity and responsibility of devising an educational plan that extends much further than school yard and school hours.

[1] Dewey, J., *School and Society* (first edition), page 116.

Teachers and school officials must not shirk this responsibility. Opportunity carries with it responsibility.

Moreover, care must be taken not to judge too favorably the homes of the masses of children by the homes of teachers, college students, or the more cultured of public school pupils. These are the select few and probably come from homes superior to those of the masses of little people who make comparatively little headway in school. There are no suitable data at hand for judging the specific needs of homes. But think of what is included in the usual list of virtues called for:[1] Honesty means being honest in scores upon scores of daily relationships with others of the family; coöperation means helping in all the multiplicity of home activities; generosity means the giving attitude in thousands of cases. So with all the virtues belonging to home life. Virtues are practiced in concrete instances only. In each of these children need helpful direction.

Play and work at home. Students of social problems find in the decadence of the home the great cause of social evils, especially among young people.[2] Industrial evolution leading to the factory system has broken the unity of the home. It is bad enough when two thirds of the men and nearly one fifth of the women[3] in America work away from the home. It is yet worse when, under such circumstances, common interests and sympathetic coöperation are scattered to the winds. All this may be unavoidable under prevailing social and economic conditions. The school cannot ameliorate these conditions at once — it can do directly but little to collect the fathers and mothers and give them work within their own home. The opportunity of the school is to give boys and girls an interest in a variety of commonplace ac-

[1] Compare lists given by Sneath, E. H., and Hodges, G., in *Moral Training in the School and Home*, pages 86, 110.

[2] Travis, T., *The Young Malefactor*, page 167.

[3] Nearing, S., *Social Adjustment*, page 162.

tivities of mutual helpfulness in the home — to counteract, so far as possible, the baneful influence of our modern industrial life.

In a very simple way, what a need to study in school things already experienced in the home and in other places of daily life! Children have their associations with other children. Mothers are called upon to suggest games for them to play, and then to show them how to play. Ere long these same good, busy mothers are again under obligation to settle some small dispute between the players. How usually at children's parties is there a real difficulty in providing a genuinely suitable entertainment! There is thus need *now* in our homes that children learn how to make provision for such social hours. Parents, mothers especially, would appreciate such assistance from the schools. Children are probably best reared in those homes where some duties, more particularly in some form of handwork, are required. What an advantage to parents and children *now* if the schools enabled the children to make many things useful and ornamental — holders, doilies, mats, etc.! The practical value of such things is equaled or even exceeded by the æsthetic influence of such articles when they are worked out with artistic design. Home means the more to those children who participate the more in the real life of the home. "... The more immediate purposes of instruction must be found among the leading things necessary for proper daily living, — that is, we must look directly to the life about us to find what subject matter the school should offer, and how this should be treated. Its curriculum will be good to the extent that it contains problems ... that are socially vital and yet within the pupils' appreciation. ..."[1] Here is a theory commonly accepted. But not until subject

[1] McMurry, F. M., *Interim Report, Committee on School Inquiry, City of New York*, 1911–1912, pages 6–7.

matter is actually outlined in terms of home life can the school contribute positive help to children in their home life.

The school and the public. One cannot read accounts of juvenile offenders without becoming strongly convinced that some institution, home, church, school, state, or the like, is under grave responsibility to help young people live better *now* in their own neighborhood. "The offences for which children are tried before the courts are usually of a trivial nature, such as stealing a neighbor's rabbit, harassing a peddler, throwing snowballs in city streets, entering vacant buildings, or lighting bonfires in dangerous places. The motive for many of these delinquencies is often proven to be pure mischief — as one group of juveniles expressed it, 'Just to be chased by the ginney.'" [1]

The spirit of the gang. Jane Addams gives the following as illustrative of what boys do in answer to their craving for adventure: "(1) Building fires along the railroad track; (2) flagging trains; (3) throwing stones at moving train windows; (4) shooting at the actors in the Olympic Theater with sling shots; (5) breaking signal lights on the railroad; (6) stealing linseed oil barrels from the railroad to make a fire; (7) taking waste from an axle box and burning it upon the railroad tracks; (8) turning a switch and running a street car off the track; (9) staying away from home to sleep in barns; (10) setting fire to a barn in order to see the fire engines come up the street; (11) knocking down signs; (12) cutting Western Union cable." [2]

In his study of sixty-six gangs of boys, Puffer gives the following group activities in which these gangs are engaged: [3]

[1] Travis, T., *The Young Malefactor*, page 20.
[2] Addams, J., *The Spirit of Youth and the City Street*, pages 55–56.
[3] Puffer, J. A., *The Boy and His Gang*, page 40.

	Per Cent
Group games — baseball, football, basketball, hockey, etc.	80
Tribal industries — hunting, fishing, etc.	74
Predatory activities — stealing, injuring property, etc.	74
Fighting	70
Swimming	68
Migrations	67
"Plaguing people"	67
Going to theaters	58
Running games — relievo, chase, etc.	47
Smoking	45
Playing cards	38
Skating	50
Sliding	18
Drinking	11

Some of these activities are highly commendable, such as baseball, hockey, fishing. On the other hand, it is a sad story when we read that 74 per cent of these gangs engage in stealing and injuring property, 70 per cent in fighting, 67 per cent in plaguing people, and the like.

Probably most adults are ill-disposed to regard such activities as mere mischief on the part of the boys, especially if mischief is to be regarded as only the normal result of effort to entertain and profit self without regard to the pleasure or welfare of others. Such youthful characteristics persist because they prove useful to boys as *they* view life.

The pictures presented by Miss Addams in her writings and her addresses, showing how the youth of Chicago — and other places also — get into all sorts of trouble for themselves and into considerable trouble for the community; the summary of juvenile court proceedings given by Travis, showing the thousands of petty "crimes" (so called) committed in the community by mere boys; the story of the mischievous antics committed by gangs of boys as told by Puffer and Forbush:[1] these and many other such studies impress upon those responsible for the education of the

[1] Forbush, W. B., *The Boy Problem.*

youth the importance of the problem of helping boys and girls live better *now* in the community.

The need of wholesome occupation. Great reforms have been made in the treatment of these unfortunates. Correction by punishment has given way to change of attitude through wise and kind guidance. This is now the great work done by the juvenile court. The school can contribute much by coöperation with court officials. This fact is recognized by Judge Lindsey. But the school must find its larger opportunity not in this correction, but in a normal prevention of such misdemeanors. Idleness of hand and mind is probably one of the conditions most potent in leading young people into mischief and misdemeanor. While in school, boys and girls are freed from evil by restraint if not by real employment. But one must ask to what extent "lessons" assigned for home work in the usual school provide against an idleness during the many hours spent out of school. The curriculum outlined in Chapters Thirteen to Sixteen attempts to meet this situation by studying in the concrete the activities enjoyed by children and adults. An appreciative acquaintance with community activities is quite an antidote to idle disregard of community interests.

But a community needs better direction given to the commendable gang spirit. The officer of the law says, "Stop," "Don't," "Leave." He commands *not* to do what the law deems detrimental to society. The school has here the opportunity to suggest, on the positive side, what boys may do, acceptable to the neighborhood; and the neighborhood needs that service *now*. The school has opportunity to serve the community very much more effectively in directing the activities of young people *now* than in striving to *prepare* pupils for the life of citizens later.

"If children behave badly in the street, or if they are lazy, the school is questioned. That is, the public holds the

school responsible for developing character *now*, while the pupil is still young." [1] Would that this were more true and that it were so recognized by the schools. Did the schools feel that responsibility more keenly, more attention would be directed to helping young people of school age in conducting themselves more circumspectly in neighborhood life. Mischief and antics of youth are not to be stopped by reiteration of " Don't " on the part of parents or officers of the law. Repression of youthful vigor is sure to be followed by expression of youthful vigor in some other direction. To substitute for mischievous activities interests in wholesome accomplishments is the only sane method of correcting such undesirable conditions. Students of social problems and of boy gangs in particular are convinced that the underlying principle in the gang is commendable, but the activity of the gang needs direction by those better informed in social problems than the boys themselves. The gang needs to learn in school of the numberless wholesome interests in which children can engage.

EFFICIENCY NOW AND EFFICIENCY LATER

The present and the future. Efficiency now is the best preparation for efficiency later. Paradoxical as this statement may seem, the position taken here is in support of the principle given at the opening of this chapter: the curriculum should contribute primarily to helping boys and girls to be efficient in what they are now doing, only secondarily to helping them to be efficient later. In other words, the best way to prepare boys and girls of elementary school age for the next grade is not to stress preparation, but to enable them to be highly efficient in the wholesome activities in which

[1] McMurry, F. M., *Interim Report, Committee on School Inquiry, City of New York*, 1911–1912, page 7.

they may be engaged, provided, of course, that such activities be normal in their stage of development.

The chief purpose of the elementary school is not to prepare for later life, but to help the child to live more fully in the immediate present. This is in accordance with his nature; the home and the community are in need of that service now; as most pupils are not in school long enough to prepare adequately for later life, under present conditions, it is the more reasonable to meet present needs. And yet, in thus emphasizing the importance of the present, one cannot be unmindful of the obligation of parents and schools to contribute as much as possible to the preparation of children for the exigencies of later life.

Accepting the principle that "to prepare for complete living" later is *a* purpose of the elementary school, even if it is subordinate to a more immediate purpose, it is imperative that provision be made for such preparation. It is clear also that in case one curriculum were used to meet immediate needs and another to prepare for later needs, such a plan would be poor economy. If possible, one curriculum should serve both the primary purpose and the secondary. As pointed out above, the traditional subjects serve primarily as preparation for the future. Can any curriculum prepare as well for later needs, while at the same time it serves primarily the present?

Transfer of efficiency. On the basis of the doctrine of "formal discipline" strictly interpreted, the traditional studies are as good for preparation as any. Reject that doctrine (as we must) and those studies are *better* than others *in case* needs are in terms of the subject matter of these traditional studies. But the real experiences of the merchant, the banker, the lawyer, the farmer, and the laborer are not, for the most part, in terms of arithmetic, geography, and language. Real experiences deal with personalities and

physical phenomena far too complicated to be designated in such terms. The case is, therefore, against the formal subjects that touch real life in no particular points. The argument is thus in favor of studies in terms of the activities of everyday life, that is, the best preparation for meeting later needs is a training in those particular activities in which the child will be engaged later. But clearly it is impossible to foresee, so far in advance, all such conditions.[1]

Under these circumstances that system of studies will prepare best that provides the largest number of points of contact with the varied activities into which the individual will enter later. Adult life consists of a great variety of social and industrial activities. But just such activities, in simpler forms, make up the lives of little people. In helping boys and girls to do better in all *their* normal activities and interests, the teacher is bringing them into touch with a very extended range of activities that will constitute their adult life. It must, of course, be recognized that many activities studied in school will not function directly in adult life and many experiences will be met later in anticipation of which no activities were provided in youth.

"Formal discipline," in the strict sense, is rejected. But formal discipline so liberally interpreted as to admit of many elements in common in earlier and later experience must be accepted.[2] Pupils generally strong in the upper grades of the traditional school are found to be relatively strong in what they undertake later. To a much greater extent will this be the case if boys and girls are enabled to be efficient

[1] Some years ago the author was dining at a restaurant in Albany, N. Y. A young man, a fond father, was serving at the table. He was soon boasting of his two-year-old boy who had already decided, so the father asserted, to be a foreign missionary. Some two years later at the same restaurant this same waiter was asked: "How is the young missionary?" "Oh," he answered, "the boy changed his mind: we don't know now what will become of him. He's a little holy terror."

[2] Compare Thorndike, E. L., *Principles of Teaching*, pages 235–249.

in the great variety of activities normal to them when those activities are similar to those of later life. There are a larger number of elements in common.

The traditional subjects, arithmetic, spelling, geography, etc., contribute but little to the present life of children. Their chief function is preparatory. But even in this they are weakening in the face of present social and industrial life. Studies in the everyday activities and interests of little people do contribute directly to efficiency in their present life and the logic of the situation supports the claim that such studies contribute effectively to the preparation for later life.

Evidences of transfer of efficiency. Adequate data are not within reach to prove the validity of this thesis: Efficiency now is the best preparation for efficiency later. However, some studies support this position and are here presented.

High school and university. Dearborn studied "The Relative Standing of Pupils in the High School and in the University."[1] He reached the conclusion that "three fourths of the students maintain throughout the university approximately the same rank which they held in high school." This is quite as would be expected, especially when it is noted that in the university the student takes such subjects as he had in the high school, e.g., English, history, mathematics. In his study of the correlation by separate studies, Dearborn found that the index of relation is lower than that for the general average. That is, the average standing of the student in his university work is closer to his average standing when in the high school than his standing in history, for example, in the university in relation to his standing in history in the high school. Putting these two findings together, some support is given to the thesis that general efficiency *now*

[1] Dearborn, W. F., Bulletin of the University of Wisconsin, No. 312.

prepares for general efficiency later. The generally successful student in the high school is the generally successful university student.

Wesleyan University graduates. A study was made of 1667 graduates of Wesleyan University. Standing in the university as indicated by "honors," Phi Beta Kappa, and "Olla Pod points" (honors bestowed by classmates on the basis of student activities) was compared with distinction in life after graduation as indicated in *Who's Who.* This conclusion was reached: "The Phi Beta Kappa man and the one who is honored by his classmates by election and undergraduate office have each approximately the same chance of becoming famous in after life."[1] This study indicates that efficiency in scholastic work and efficiency in undergraduate student activities lead to similar efficiency later.

Elementary texts. In recent years a number of textbooks[2] on general science have been published. These books seem to be pioneer efforts to present elementary science, not as a preparation for later and more advanced work, but strictly as a means of meeting present needs. There is a decided tendency to view such work, if well done, as contributing to efficiency in more advanced study by those who choose to continue, though the primary purpose is not preparation, but the satisfaction of a present need. Editorial comment in the *School Review* for June, 1913, is typical: "Any good work must be considered good preparation for the following years of high school and college. Facts which will be needed in the future years of any course at school are best taught when they are needed." In this connection note should be taken of a summary of opinions on the teaching

[1] Nicholson, F. W., "Success in College and in After Life." *School and Society,* Vol. 2, pages 229–232.

[2] Barber, F. D., *First Course in General Science;* Clark, B. M., *An Introduction to Science;* Caldwell, O. W., and Eikenberry, W. L., *Elements of General Science.*

of science: "The schools reached the lowest point in real science instruction when, under the stress of preparing for higher institutions, they narrowed their work to 'the forty quantitative experiments.'" [1]

Entrance requirements. The marked tendency in the entrance requirements in universities is in support of this principle. Earlier, specific preparation was demanded as necessary for the pursuance of higher studies. Now there is evidently a disposition to recognize good work done in secondary schools as suitable qualification for admission. Efficiency earlier prepares for efficiency later.[2]

These few instances are not presented as proofs, but only as indications of what seems the truth. Reliable conclusions must wait until more complete data are available. But these studies seem to support the proposition that efficiency in what one is doing now prepares the individual for being efficient in what he may do later. This is proposed as a principle only in the education of children of elementary school age, where special technic is not essential for efficiency. While this principle applies to the formal traditional curriculum, in a measure, it applies much more effectively to the course of study herein outlined. The explanation is simple. The curriculum proposed is directly concerned with a much wider range of activities — a range as extended as the interests of elementary pupils may be.

Elements in efficiency. In what does this preparation consist — this preparation that is carried over from the elementary school experience to later experience in high school or in life outside of school? This preparation cannot be in terms of arithmetic, for efficiency in later life with most

[1] Woodhull, J. F., *Educational Review*, Vol. 48, pages 298–300.

[2] Compare Thorndike, E. L., "The Future of the College Entrance Examination Board," in *Educational Review*, Vol. 31, pages 470–483; Jones, A. L., "Entrance Examinations and College Records," in *Educational Review*, Vol. 48, pages 109–122.

of those who are now pupils in the elementary school is not to be measured in terms of arithmetic, language, geography, etc. The question as to what is carried over from an earlier to a later stage may be almost synonymous with the question: What are the elements that make for efficiency in any phase of life? The following brief analysis of the efficient man is offered as a contribution to the answer.

The problem as personal. It is of importance that the situation be sufficiently well understood that a real problem may be appreciated, and that this problem be deeply felt as a personal one. The teacher's arbitrary assignment of the next ten pages in history, or nine problems in arithmetic, or certain descriptions in geography, cannot be felt by the pupil as a real problem and a personal problem. A laboring man, a clerk, any subordinate who merely executes directions of a superior is not solving real problems. He is efficient only as a machine is efficient. Genuinely real problems cannot be assigned to one by some one else. Real problems develop in one's normal experience. They are the result of conflicting conditions. The arbitrarily assigned problem is virtually only a contentless exercise — a sort of mechanical drill. An efficient clerk in a grocery store must observe sufficiently well to know why his employer's trade is decreasing; it may be because of lack of cleanliness in the store. He senses the problem as personal because he himself can effect a change. Such is the case in other industrial or business occupations. In school work such a problem grows out of common interest in the activities that affect the pupils. A class is studying the grocery store as a local industry directly affecting them all. How does the merchant serve his patrons with vegetables? This question becomes a personal problem. Efficiency calls for an attitude of sensing problems and regarding them as personal.

Initiative essential. Initiative in working at the problem is essential for effectiveness. Those who must be constantly told to work or study accomplish little. Assigned lessons in school are virtually directions to go to work. Very little effective studying is done by the students under such circumstances.

It is not at all natural that this initiative display itself upon the traditional curriculum. Work there is not upon normal but only upon artificial problems. Initiative is aroused when one meets, under normal circumstances, a situation which is felt as a personal problem. School work is not the most effective, in the present or as preparation for later work, when it is in response to assigned tasks — lessons — as many each day as the pupil has subjects for study. Pupils soon learn to work upon their own initiative when a large problem covering several days or even weeks is before them. There is no definite amount of work that must be accomplished each day, but a large piece of work is to be done to the best of one's ability. This opportunity presents a strong appeal to initiative in young people, who need more of this opportunity. Too little of this type of work is offered in the traditional curriculum. A curriculum that deals more specifically with the activities of everyday life presents in a large way this opportunity. Initiative is very potent in efficiency. The spirit of initiative carries over into later life.

Method of study. How to study [1] is one of the new problems in educational discussion. Methods of teaching have been much discussed for some time. Processes of learning have been given considerable attention. But study is different from learning.[2] Discussions on methods of study are limited too much to the formal school lessons. Study is too nar-

[1] McMurry, F. M., *How to Study;* Earhart, Lida, *Systematic Study in the Elementary Schools.*

[2] In German schools the term "lernen" has applied to the work of young pupils; "studieren," to the work of older pupils.

rowly considered; it belongs to the real life of children far more than in school lessons. School problems ought not to be essentially different from out-of-school problems. A boy of twelve is given a camera by his father. The boy has seen the photographer at work using a tripod. He wishes a tripod for his camera. The price of a manufactured tripod is not at his command, but a bench and tools are within his reach. He observes another tripod; he notes certain essentials, e.g., stability and adjustability. But in the commercial product are fixtures which he cannot duplicate. He must invent a more homely device. This *method of attack* is an essential in efficiency. One must analyze conditions and then construct measures under the guidance of the personal problem before him. In the usual school work there is little call for such study. There is usually learning rather than study. So-called "problems" are artificial, designed for training, rather than growing naturally out of the meeting of real needs. School work may have the *form* of a real out-of-school problem. For example: "A hare is 80 leaps before a hound. The hare takes four leaps while the hound takes three. But two of the hound's leaps are equal to three of the hare's. How many leaps must the hound take to catch the hare?" [1] Such a problem might represent a real situation, but even if it did, no boy or girl would be at all interested in the conclusion that the hound must jump 480 times before he pounced upon this exceptional and foolish little animal. The problem is clearly presented as an exercise in fractions. It is a real puzzle to most pupils. Real problems, true to life, normally arising as a common interest or experience, invite the pupil to analyze conditions and invent means to satisfy needs. Such a method of attack is common to all problems in experience, and is carried over from earlier into later life.

[1] As remembered from an old text in arithmetic.

Persistence. Persistence is a requisite in efficiency. This statement needs no support by way of discussion. It may be pointed out, however, that in the traditional school work, the artificial problems are too limited to provide the opportunity for the sort of persistence which is really valuable. "Lessons" are comparatively short. Real life problems vary in length and difficulty. If problems arise by reason of real needs felt by the pupils as personal, persistence is natural. In the curriculum herein proposed sixth-grade pupils spend about eight weeks of two and one half hours each day on the one problem, how manufacturing is carried on. This is an industry that affects all and in a variety of aspects is felt by pupils as a personal problem. This spirit of persistency in working out a real problem is carried over from an earlier to a later experience.

Tentative attitude. The tentative attitude toward results is a characteristic of the efficient man. In real life no problems are finally settled. "Circumstances alter cases." Changes are taking place. Market prices depend upon supply and demand. In the traditional curriculum pupils usually get the notion that the several "problems" on which they are working are solved; conclusions are reached and set aside as final. The hound must take 480 leaps. The artificial problem of the school leads too much to the "rest-on-your-oars" attitude. It prompts to idleness until the next assignment. The tentative attitude — the open-mindedness toward all results — is the attitude that spurs one on to the discovery of new conditions and the sensing of new problems. This is the spirit that is fostered by the curriculum which deals directly with the social and industrial activities in real life. This open-mindedness is carried over to later experiences.

OPPORTUNITY FOR A CURRICULUM OF PRESENT ACTIVITIES

"It has been held that interests in the school must in the nature of the case be at first largely artificial. The child is supposed to be preparing for adult life, but he is not surrounded by the conditions of adult life and has not within himself the natural impulses of adults. It is assumed therefore that interests in adult activities must be artificially stimulated. It may be questioned in the first place whether the child cannot in a large measure better be prepared for adult life by living most completely the life of a child and developing in a natural way the interests of childhood, later youth and manhood, as the conditions and instinctive tendencies change." [1]

Dewey states Rousseau's central idea in these words: "The child is best prepared for life as an adult by experiencing in childhood what has meaning to him as a child, and further, the child has a right to enjoy his childhood. Because he is a growing animal who must develop so as to live successfully in the grown-up world, nothing should be done to interfere with growth, and everything should be done to further the full and free development of his body and his mind." [2]

In this chapter emphasis has been given to the importance of attending to immediate needs. On the contrary, the custom of preparing for later occasions is due largely to the adult viewpoint. Quite naturally the adult asks: How shall the boy prepare for the duties he must meet at my stage of life? The boy, whose vision is limited according to his experience, acts as though the question were: How can I get the very most out of what I am now doing? The traditional curriculum is accepted as the answer to the adult's question. The curriculum presented in this volume

[1] Kirkpatrick, E. A., *The Individual in the Making*, page 32.
[2] Dewey, J., *Schools of Tomorrow*, pages 17–18.

is proposed as an answer to the boy's question. By reason of early withdrawal from school most boys and girls never reach just the adult stage designed in the Three-R curriculum. Further, as the boy and the girl are concerned, by nature, primarily with their present, the essentially preparatory curriculum does not, it cannot, appeal to their motives and provoke in them the generous responses as a curriculum that concerns itself primarily with their present environment. Again, the traditional curriculum, in its emphasis upon preparation, misses a great opportunity to serve both individual and community when both need such service. Finally, preparation for efficiency later is more effectively made when children of the elementary school age are given the opportunity to exercise those traits that contribute so much to efficiency in all phases of life. This opportunity is conspicuously larger in a curriculum of present activities than in the curriculum of traditional forms.

Supplementary Readings

ADDAMS, JANE. *The Spirit of Youth and the City Street*, pages 3–21.
AYRES, L. P. *Laggards in Our Schools*, pages 89–98.
BAGLEY, W. C. *The Educative Process*, pages 203–217.
(Compiled.) *The Child in the City*, pages 125–133.
DAVIS, J. B. *Vocational and Moral Guidance*, pages 193–197.
DEAN, A. D. *The Worker and the State*, pages 61–146.
DRAPER, A. S. *American Education*, pages 278–290.
ELIOT, C. W. *Education for Efficiency.*
—— *The Training for an Effective Life*, pages 1–78.
FINDLAY, J. J. *Demonstration School Record*, Vol. II, pages 19–38.
FORBUSH, W. B. *The Boy Problem*, pages 42–157.
JOHNSTON, C. H. *The Modern High School*, pages 312–317.
MERIAM, J. L. *The School's Contribution to the Home*, Report (1910) International Congress on Home Education.
NEARING, SCOTT. *Social Adjustment*, pages 48–69, 161–175.
PAGE, W. H. *The Rebuilding of Old Commonwealths*, pages 49–104.
SNEATH, E. H., and HODGES, G. *Moral Training in the School and Home*, pages 71–138.

General References

DEWEY, J. *The Child and the Curriculum.*
FARWELL, P. T. *Village Improvement.*
MCMURRY, F. M. *How to Study and Teaching How to Study.*
—— *Elementary School Standards.*
PUFFER, J. A. *The Boy and His Gang.*
TRAVIS, T. *The Young Malefactor.*

Studies Suggesting Relation of Efficiency Now to Efficiency Later

CORNMAN, O. P. *Spelling in the Elementary School*, pages 46–70.
DEARBORN, W. F. Bulletin of the University of Wisconsin, No. 312.
JONES, A. L. "Entrance Examinations and College Records." *Educational Review*, Vol. 48, pages 109–122.
LOWELL, A. L. "College Studies and Professional Training." *Educational Review*, Vol. 42, pages 217–233.
MERIAM, J. L. *Normal School Education and Efficiency in Teaching.*
—— "How Well May Pupils be Prepared for High School Work without Studying Arithmetic, Grammar, etc., in the Grades?" *Journal of Educational Psychology*, Vol. 6, pages 361–364.
NICHOLSON, F. W., "Success in College and in After Life." *School and Society*, Vol. 2, pages 229–232.
STAPLES, O. B. "Is There a Relation between the Amount of Schooling and Financial Success in Life?" *Elementary School Teacher*, Vol. 10, pages 261–269.
THORNDIKE, E. L. "The Future of the College Entrance Examination Board." *Educational Review*, Vol. 31, pages 470–483.
WOODHULL, J. F. "General Science." *Educational Review*, Vol. 48, pages 298–300.

Statement Outline for Chapter Nine

The tendency in modern education is unquestionably toward the concrete and the practical.
- The concrete is found in real experience and in actual situations. The practical contributes to both work and leisure.
- Educational reformers have advocated the concrete.
- Life outside of school lays claim to the practical.

Examples of the demand for the concrete and the practical are numerous.

Schools attempt a response to this social demand.
- Play is introduced.
  - Good games are used as devices in teaching the Three R subjects of less value.
  - This misuse of games becomes an abuse of play.
- Industrial activities are appealed to.
  - Hypothetical situations are invented as "practical application."
  - Actual industrial situations are organized in terms of Three R subjects.
  - Such misuse becomes an abuse.
- This response misinterprets the principle, "from the known to the unknown."
- Life values are subordinated to school values.

Educational considerations favor the concrete and the practical.
- The child is interested in the concrete.
- Moral training rests upon the concrete.
- In the concrete the curriculum is made vital.
- Relative values are significant only in the concrete.
- Correlation and organization are simplified in the concrete.
- Retardation is lessened by use of the concrete.

A curriculum in terms of the concrete need not mean a rejection of the subject matter of the Three R's.

CHAPTER NINE

The Curriculum in Terms of the Concrete and the Practical

PRINCIPLE TWO

The curriculum should be selected directly from real life and should be expressed in terms of the activities and the environments of people.

This principle seems so reasonable and commonplace that it is at once regarded as quite in accordance with practice in the more progressive schools. It may be observed, however, that the facts are quite otherwise. Some portion of this chapter must therefore be devoted to showing what is a mistaken notion as to the application of this principle in our public schools. The chief purpose in this chapter is to set forth the reasonableness of a direct study of the concrete and the practical in everyday life, instead of the abstract and speculative so characteristic of the traditional curriculum. The reader is asked to forget for the time the school subjects, reading, writing, arithmetic, language, etc., and to place himself in readiness to view the life of the school strictly in terms of everyday life out of school. The traditional view of elementary education makes this seem almost impossible. The difficulty is lessened to the extent that one is able to center attention not on subjects for study, but on boys and girls. The argument throughout this book is based upon the purpose proposed for elementary education: *To help boys and girls do better in all those wholesome activities in which they normally engage.*

THE DEMAND FOR THE CONCRETE AND THE PRACTICAL

The meaning of "concrete" and "practical." The tendency in modern education is unquestionably toward

the concrete and the practical. There is evidence of a widespread reaction against empty formalism and the glittering generalities of a school divorced from real life. This reaction expresses itself, on the positive side, by emphasizing the importance of acquaintance with the concrete world of things and the practical affairs of people.

It is generally presumed that the term "concrete" is fairly well understood. No teacher regards "one and one are two" as concrete. But "one apple and one apple are two apples" is in textbooks and in class work quite generally treated as concrete. Authors and teachers thus intend to facilitate the arithmetical problem by giving it an objective reference in the term "apple." In this way denominate numbers are commonly regarded as concrete arithmetic in contrast to abstract work in general fractions.

Language work on the tense of verbs is regarded by teachers as concrete if sentences are constructed from the experience of the pupils, e.g., I *write* my spelling lesson; I *wrote* my spelling lesson; I *have written* my spelling lesson. The geography of the Mississippi River system is thought concrete if a miniature of this system is constructed on the sand table. But there is a seriously erroneous idea in all this intended concreteness. Such details of arithmetic, language, and geography are properly concrete only when they function in the real experience of people, when that experience is of primary importance and these details of arithmetic, language, and geography are instruments in contributing to the effectiveness of that experience. A boy has an *actual* experience with apples not in an arithmetic class, but in a fruit store. He ate one apple and gave his little brother one. He reports this to his teacher. *Now*, "one apple that I ate and one apple that I gave to my brother are the two apples I bought at the fruit store" becomes strictly concrete. Similarly, in a report to teacher

or parent that the pupil wrote his spelling lesson, or that extensive agriculture in the Mississippi Valley is due to that great river system, the tense of the verb and the geographical reference become strictly concrete. Arithmetic, language, and geography cannot be *made* concrete by arbitrary application to hypothetical cases, or, indeed, to real experience. " Concrete arithmetic " is a misnomer. There is no " concrete language " as a school subject. Even most of the geography is far from being concrete. Only in real experience and in natural phenomena can teacher and pupil find the concrete. This statement does not identify the concrete and the objective. An intellectual act is truly concrete; for example, the young trapper puzzled seriously how to insnare that coon alive. In short, in practically none of the traditional school curricula can one find the concrete. The concrete is found only in real experience and in natural phenomena.[1]

The term " practical " is not used here in the narrow bread-and-butter sense. Earning capacity and inclination stamp a man as practical. But the ability and inclination to use well his earnings in work or in leisure are no less indicative of the practical man. Latin and music, if they contribute appreciably to wholesome leisure, are as practical as science and mathematics when used to increase the earning power of men.

Associated together, the concrete and the practical in education have reference to the definite everyday world of things and lives of people. Thus this demand for the concrete and practical in modern education is only an insistence that school work be very intimately associated with real situations in the everyday life of people.

[1] Compare Dewey, J., Article on "Concrete and Abstract," in Monroe's *Cyclopedia of Education; How We Think*, pages 135–144; Eliot, C. W., *The Concrete and Practical in Education*, pages 7–22; McMurry, F. M., Statement in *Teachers College Record*, Vol. 4, No. 2, page 6.

Educational reformers and the concrete. At the very beginning of the sixteenth century Rabelais opposed the extreme scholastic formalism of the Middle Ages. Words had been exalted over things; learning was a process of mere memorizing; reasoning was extremely formal. There was a contempt for the study of the actual behavior of men in the pursuits of life. Rabelais opposed all this by demanding an education " which appeals to experience and to facts, which trains the young man, not only for the discussion of the schools, but for real life, and for intercourse with the world. . . ." [1] Somewhat more than a century later Locke felt called upon to react upon the formal instruction of his times and advocate studies that contributed directly to the preparation for life. He asked for more attention to the mother tongue as a means of communication; for geography as an exercise of eyes and memory; for arithmetic as of general use in all phases of life. In less than another century Rousseau strengthened the tendency during these three centuries by the publication of his *Émile*. " There is a choice in the things which ought to be taught as well as in the time fit for learning them. Of the knowledges within our reach, some are false, others are useless, and still others serve to nourish the pride of him who has them. . . . It is not a question of knowing what is, but only what is useful." [2] An education in the real things of life was his claim. In recent years no one has spoken more forcibly in favor of studying the real things of life than John Dewey. " The child is already active, and the question of education is the question of taking hold of his activities, of giving them direction." [3] These men have contributed greatly to the tendency to study the concrete, everyday affairs of life.

[1] Payne, W. H., *Compayré's History of Pedagogy*, page 92.
[2] Rousseau, J. J., *Émile*. [3] *School and Society* (1915 edition), page 37.

Out-of-school and the practical. In present practice the traditional curriculum, so commonly used throughout the schools, is much less related to real life than is usually supposed by those who are the teachers and directors of the schools. We learn in school to read. The emphasis in all the early stages where the masses are found is upon oral reading. But in life out of school oral expression is a comparatively small part in reading. In school we learn to read " lessons " assigned. Out-of-school life presents the problem of wise selection, of reading silently, but rapidly, omitting portions, thoughtfully considering other portions. Daily papers, periodicals, and current literature present this need. School reading is too little directed to such practical need. Texts in arithmetic are classifications of quantitative problems and exercises. An arithmetic is a cross section of experience on the quantitative level. We do not experience fractions in ordinary life. We occasionally have an experience which calls for calculation by the use of a fraction. In real life attention is directed to particular experiences which, when associated with many other such, lead to the so-called " general notion " — a mere abstraction from experience. So geography, language, and spelling do not deal with real life; they are all mere cross sections of many experiences on their respective levels.

Usage has virtually reduced the commonly accepted curriculum to a great piece of formalism. It is indeed comparable to the formalism against which Rabelais, Locke, and other realists fought. Pupils may be rapid and accurate in arithmetical exercises, but be ignorant of the real business situations where such principles are most applicable. Just such is the frequent complaint on the part of those who employ boys and girls educated in public schools. Pupils pass examinations in language, composition, and grammar, but in the office they are unable to adapt language to the business in hand.

It is because elementary education has fallen so far behind our industrial development that a change in the curriculum is demanded. The demand is for better economy and for greater efficiency. It is a demand that the school as a social institution be in greater harmony with the life which it is intended to serve. The strongest demand is for trade schools, technical schools, vocational guidance, and the like. Comparatively little has as yet been demanded of the usual elementary school, especially below the upper grades. But the demand is clearly indicating a change in the nature of the work lower down. The demand for more attention to vocational interests is a real demand for the concrete and practical in school work.

EXAMPLES OF THIS DEMAND

Rabelais, Locke, Rousseau, and others of historic record have protested against empty formalism and have insisted upon giving attention to things of real life. In the immediate present there are a variety of agencies instituting reactions against traditional formalism and making strong demands that the education of youth be more in tune with real life.

Space forbids presenting here illustrations of these demands. A few may be merely named. The Committee on Need of Investigation of the Culture Element and Economy of Time in Education, appointed by the National Education Association in 1903, has made a number of reports in which this demand is clearly expressed or implied.[1] The Minneapolis Vocational Survey, made in 1913, led to a demand that school work be provided with vocational motive. The Consumers' League of Hartford, Connecticut,

[1] National Education Association, 1908, pages 466–478; 1911, pages 222–226; 1913, pages 217–246; 1914, pages 206–222. Bureau of Education Bulletin, No. 38, 1913.

in 1911 sought to influence the schools to fit children for trade, commercial, and domestic life. The Massachusetts Commission on Industrial Education, in 1906, expressed this demand in the words of its chairman, Paul H. Hanus: "Heretofore, we have planned the work of our public schools almost entirely with reference to 'culture'; we have done very little to stimulate a vocational purpose and still less to provide for the realization of that purpose." The City Club of Chicago in 1909 directed their Committee on Public Education to make an extended inquiry on vocational training. In various parts of the country parents are calling upon the schools to allow credit for home work.

Only a very few examples of the demands for school work more directly and closely related to life work have been given.[1] Evidence of a more restricted nature may be found in the tendency in most schools to introduce — or increase if already introduced — courses in manual training, domestic science, commercial subjects, etc.

Such is some of the evidence of the call for a curriculum more concrete — more specifically directed to real life activities. The demands of the business man must be respected. It is the duty of the educator to respond by adjusting the school to meet such demands. In these expressions by business men and organizations there is very little suggestion of details in the solution of such a problem. This task belongs to the educators. The Consumers' League of Connecticut is probably right in asserting that "in our country it is not the schools that have initiated educational reforms, but the urgent call of the people." It seems reasonable to expect that the school leaders should be such students of social and industrial progress that they

[1] For further examples, see Leavitt, F. M., *Examples of Industrial Education;* Report on Vocational Training, 1912, City Club of Chicago; Cooley, E. G., *Vocational Education in Europe;* recent reports of the United States Commissioner of Education.

can foresee many of the coming demands and make provision. But it must be admitted that the schools are tardy in responding to the initial demands made by the people. It must also be recognized that this demand for the concrete is by no means universal, and comparatively few schools have as yet responded. The tendency is evident, and the strength of this tendency cannot be slightingly overlooked.

RESPONSE OF THE SCHOOLS TO THE SOCIAL DEMAND

Misuse of play. Quite in compliance with these demands for education more closely related to real life, schools and individual teachers have made an earnest effort to introduce into their work the changes called for. Without doubt a great deal of good has been thus accomplished. But it must be pointed out how most of these efforts in the elementary schools have been seriously inconsistent. The industrial world has asked in the clearest of terms that the schools bring the youth into a better knowledge and appreciation of the practical life about them. The schools answer with the very best intent, by using portions from real life as means of teaching the very subject matter which has become so divorced from real life. The industrial world makes no complaint, for it is unable to understand what is being done and fully believes that school pupils are receiving instruction that is much in advance of the traditional work and in accordance with progressive movements. A few typical illustrations will make clear the inconsistency in much of present practice.

Take the first illustrations from the realm of so-called "play" in instruction. In recent years we have been led to recognize the potency of play in child development. Play is normal with children. True play in youth is the forerunner of work in adult life. But play is not primarily an instrument in development. It is one phase of life, in both

infancy and adult life.[1] A few illustrations of the use of play in instruction will show the misuse to which it is put.

Two phases of this use of games may be noted. First, the use of well-known games which have been used for some time as means of recreation and enjoyment without any relation whatever to their educational value. They have been in use for real fun; they are now put to use as instruments in school studies. Second, the invention of games which in themselves are not so full of fun, but show clearly that they have been arranged primarily as instruments in the school studies.

Baseball is the characteristically American game. Little boys play it — and quite skillfully. College girls play at it with considerable vigor. Professionals make it their summer work. To both players and audience baseball is a great game, affording to all an enjoyment equaled by scarcely another form of sport. The following is the reported *use* made of this game.

BASEBALL

Preparation for the game:

1. Selection and making two copies of problems, one for the pitcher, the other for the umpire (teacher).
2. Choosing of team and team names by the children.

Scheme of game:

Captains compete on problems to decide which team has first "bats." The first correctly finished wins "bats" for his team. Captains choose at signal, "Play ball." The successful captain then works on paper, competing with the batter at board, who is also competing with the catcher. If the batter is the first one finished and correct, he passes on to "first," where he competes with the first baseman and the right fielder at the same time that another of his team is working at bats. If the batter is not the first one finished and correct, he has been put out. Three outs means change of teams at bats and two changes make an inning. A "run" consists of a player having successfully passed the third base and counts 1 for his team.

[1] See Chapter Fourteen for further discussion of this.

COMPARATIVE TABLE

Table of Baseball	*Formal Drill*
Problem worked in game:	
(NUMBER OF PROBLEMS)	
First game, 7	
Second game, 9	Average, $8\frac{2}{3}$ problems per game
Third game, 10	
Problems in formal drill:	
	Average, $4\frac{2}{3}$ per day

This means, of course, that $8\frac{2}{3}$ problems were correctly worked by *different* pupils, during the game, those who were running for their team, as opposed to an average of $4\frac{2}{3}$ for each child during the formal drill. However, by the time of the third game all the children were working all the problems, which gave each child ten problems during that hour.[1]

This game was used in the State Normal School of Los Angeles, California, under the direction of Myrtie Collier, teacher of mathematics. The aim of the experiment was, "(1), to prove that more ground may be covered than is required by our course of study, (2), to determine the effects of plays and games in arithmetical drill." On the second of these purposes the training-teacher comments: "During this period all the children took an active part in the arithmetic games, which were carefully and skillfully carried out by the teacher in charge. The interest was keen and the children worked hard and cheerfully when a game was in view."

Another example of a similar use of a well-known game is suggestive.

We played parcheesi as a help in adding, and, best of all, used dice to learn to count quickly. We began by throwing two dice at a time. Winifred threw first and if the upturned faces happened to be "six" and "one" she would add the two together (at first by actually counting the spots) and say she had seven spots. . . .[2]

[1] Mathews, Pauline, *Elementary School Teacher*, Vol. 14, pages 320–321. See this article for other such games.

[2] Stoner, Winifred, *Natural Education*, page 130.

Extensive use is now being made of such games as bean bags, marbles, tenpins, etc., *to provide opportunity for studies in number.* "What a good device for teaching! The pupils are learning numbers without knowing it." Such is the frequent comment by the observer who does not analyze closely either the spirit of the pupils or the nature of the so-called game. Close analysis of the game and of the real spirit of the pupils is not expected. In such cases attention of both teacher and observer is directed to the "number work" involved. The game is only a method, a device.

Such *use* of the game is a real *abuse* of the game. This criticism is, of course, upon the assumption that the game is regarded as originally an activity of genuine play. If by game is meant a mere device, criticism may be made upon its use just as criticism may be made upon a great variety of devices used in school. Discussion of the use of devices will be given in Chapter Eighteen. Here the question is that of using an activity primarily for fun as an instrument in teaching to pupils subjects which, to them at least, are of little concern. In the baseball game as used above, boys, and girls too, will readily see how the popular game has been twisted out of shape. Indeed the baseball devotee would not recognize the game. As a device nearly twice the amount of ground was covered by this "method" when compared with work done by formal drill. Interest, too, was keen and the children worked hard *when a game was in view.* It must be insisted that the question of relative values has not been duly considered. A genuinely enjoyable game is of much more value — as a phase of normal life — than the "arithmetic" or "geography" taught through the game. Care should be taken not to use as an instrument that which is in itself of greater value than the thing sought through its use. Our traditional esteem for these old formal subjects makes this viewpoint difficult to

accept. But when we face the growing child and note the relation of his environment and his activity to that growth, the whole question of relative values takes on quite another aspect.

Of yet more abuse — to the pupils this time — is the use of so-called games devised to serve as instruments in instruction. Such games are, probably, more numerous than games of intrinsic fun value. These devised games are not properly of fun value; their primary value is as a device.

By reason of the attention given to "The Montessori Method," an illustration is taken from that work.

> One of our most interesting discoveries was made in the effort to devise a game through which the children might, without effort, learn to read words. We spread out upon one of the large tables a great variety of toys. Each one of them had a corresponding card upon which the name of the toy was written. We folded these little cards and mixed them up in a basket, and the children who knew how to read were allowed to take turns in drawing these cards from the basket. Each child had to carry his card back to his desk, unfold it quietly, and read it mentally, not showing it to those about him. He then had to fold it up again, so that the secret which it contained should remain unknown. Taking the folded card in his hand, he went to the table. He had then to pronounce clearly the name of a toy and present the card to the directress in order that she might verify the word he had spoken. The little card thus became current coin with which he might acquire the toy he had named. For, if he pronounced the word clearly and indicated the correct object, the directress allowed him to take the toy, and to play with it as long as he wished.
>
> When each child had had a turn, the directress called the first child and let him draw a card from another basket. This card he read as soon as he had drawn it. It contained the name of one of his companions who did not yet know how to read, and for that reason could not have a toy. The child who had read the name then offered to his little friend the toy with which he had been playing. We taught the children to present these toys in a gracious and polite way, accompanying the act with a bow. In this way we did away with every idea of class distinction, and inspired the sentiment of kindness toward those who did not possess the same blessings as ourselves. This reading game proceeded in a marvelous way. The contentment of these poor children in possessing even for a little while such beautiful toys can be easily imagined.

But what was my amazement, when the children, having learned to understand the written cards, *refused* to take the toys! They explained that they did not wish to waste time in playing, and, with a species of insatiable desire, preferred to draw out and read the cards one after another!

I watched them, seeking to understand the secret of these souls, of whose greatness I had been so ignorant! As I stood in meditation among the eager children, the discovery that it was knowledge they loved, and not the silly *game*, filled me with wonder and made me think of the greatness of the human soul![1]

Two illustrations may be taken from the writings of one who has attracted considerable attention by her advocacy of "natural education."

I found a Japanese computer of much use in teaching Winifred to add and subtract quickly. We would play that General Washington and Lord Cornwallis had two divisions of soldiers and an invincible bullet sent one of Cornwallis' soldiers into oblivion (or right of the frame). Winifred would quickly tell me how many soldiers remained and thus we would add new men or take others away, keeping her attention on the adding and subtracting process. In order to remember the mathematical names applied to the different parts in a question of subtraction, we would make the great General Minuend fight with poor Major Subtrahend and the men who were left on the battle field were called the poor little remainder. Thus Winifred's first ideas of addition and multiplication came to her through working with real objects.[2]

In such games as this Winifred was not allowed to play more than fifteen minutes at a time "because mathematical play is the most strenuous of all educational games."

I have invented a geography card game with up-to-date questions concerning the happenings in various countries and we often play this game with her father in the evenings. There is always some nice prize waiting for the winner, and we all play with zest. Her father tries to win the game from me and I from him, while Winifred strives to get ahead of both parents.

I have made a number of games to teach nearly all the branches after the plan of this geography game. . . .[3]

[1] Montessori, M., *The Montessori Method*, pages 299–300.
[2] Stoner, Winifred, *Natural Education*, pages 134–135.
[3] *Ibid.*, page 94. Consult Mrs. Stoner's book for a number of such games.

In the year 1910–1911 the author visited many schools in Germany, principally in Berlin and Munich. He looked in vain for games used well in school. In the parks and gardens too frequently appeared the signs, "Kein Spielplatz," "Kinderwagen Verboten." But at length one teacher was found who claimed she conducted games as real school work. For the observer's special benefit she interrupted her regular work and proceeded with the game. She took from her desk some splints of wood. She passed up and down the aisles giving to each pupil one splint. These splints were left in irregular order upon the pupils' desks. The teacher took a position in front of the pupils. She stood very erect and began telling of the great German army. In the morning the soldiers appear in their uniforms, they look so fresh, so strong; they stand erect. She paused in her story. Each pupil took his splint and placed it with great care on his desk perpendicular to the lower edge. The teacher passed about correcting those pupils whose splints did not well represent the erect position of the soldiers. The teacher then returned to her position in front. She told of the long forced marches the soldiers were obliged to take. In the dust and heat, without sufficient food and drink, they became very tired. As her story progressed, the teacher's position became less erect, and her voice lowered and weakened. She paused. Each pupil took his splint and laid it horizontal to the edge of the desk. The soldiers had lain down to rest. The teacher than came to her visitor saying: "Now do not go back to America and say we do not play in our German schools."

In the *Teachers College Record* for November, 1912, is given a list of thirty-eight games. In the paragraph preceding this list is the statement, "In the list which follows there are some games which are made to serve this arithmetical purpose. . . . The ingenuity of the teacher will

enable her to make others of similar character which especially fit her needs." [1] Note in this connection only two games from this list.

Fractions. The teacher has two cards on which are fractions, and the children add these fractions in turn. If the answer is correct, but is not in its lowest terms, the pupil gets one of the fractions; if it is reduced to lowest terms, he gets both. This can be applied to other processes.

Simon says, "Thumbs up." One pupil acts as the leader. Each of the other players is numbered and takes the position of thumbs up. The leader says, "Simon says 15." The thumbs of 3 and 5 (the factors) must go down. "Simon says 12," 2, 3, 4, and 6 must go down. A penalty may be given for failure.[2]

There may rightly be full sympathy with the teachers who meet situations which seem to compel them to invent such games. The situation is merely that of subject matter and pupil that do not readily unite. What device will accomplish this? A game might serve better than a prize of some kind. None of the usual games played affords just the opportunity needed. A game is invented. But, as in the typical cases above, such games lack the fun element that makes them real games. One of the above games was referred to by the teacher as "silly." Games may be quite accurately tested by the extent to which they are voluntarily played by children out from under the influence of teacher or school. To what extent do children, of their own accord, read slips to secure toys; to what extent do they play "fractions" or "Simon says '15'"? The game may be further tested within the schoolroom. Watch carefully the responsiveness of the pupils. As soon as interest lessens something is wrong. The probability is that the teacher is endeavoring to get more arithmetic or geography than *naturally* belongs to the game. This occurs

[1] *Teachers College Record*, 1912, No. 5, pages 7–9.
[2] *Ibid.*, page 11.

very early in any game which has been devised not for fun but for instruction.

Another reason for this misuse of the game is the notion that elementary schooling should be made pleasant. This mistaken notion is not of recent origin. " The Ancients moulded toothsome dainties into the forms of the letters, and thus, as it were, made children swallow the alphabet." [1] This " gingerbread method " was practiced in the eighteenth century by Basedow, who said, " our methods make studies only one third as long and thrice as agreeable." Locke, in the seventeenth century, believed in making methods of teaching attractive to the pupils. He said: " They may be taught to read, without perceiving it to be anything but a sport and play themselves into that which others are whipped for." [2]

Later Pestalozzi and Froebel saw play quite differently. The idea of Locke and Basedow seems to have more influence now than that of Pestalozzi and Froebel, who regarded play of more importance as a phase of normal development than as a sop to induce pupils to study. " Have made problems bearing on games, as, so many boys played a score game: imagine scores made by different boys and girls and make problems." [3]

Thus play is too frequently used as a sugar-coating for the bitter pills in the usual school work. When thus used it is misused as a game. But the censure should be directed against the misuse and abuse of the game, not against play as a real part of school.[4]

The game is a natural right of children. When used in school as a phase of normal development — which is a large phase in childhood — it carries with it much instruction.

[1] Payne, W. H., *Compayré's History of Pedagogy*, page 90.
[2] *Ibid.*, page 206. [3] *Ladies' Home Journal*, February, 1913, page 46.
[4] Compare C. M. Gayley, *Idols*, pages 113–118.

Competition is keen in baseball, marbles, tenpins, etc., *if those games are played primarily for fun.* There is scarcely any such competition when the primary object is addition or the multiplication table, or reading names, or acquiring geographical information. And pupils in school are not easily fooled. There is some novelty in an "arithmetic game," but the novelty is soon gone when fun is not inherent in the game. The traditional curriculum is a serious course of study. The attempt to *use* the game as an instrument will *abuse* the game more than help in studying the traditional subjects. The game has its place in school occupations, because it is a phase of the normal life of children. Its proper place in school will be pointed out later.[1]

Misuse of industries. A second example of the misuse of experience in instruction may be taken from the more serious side of life, viz., vocational activities. Here is a field universally recognized as of practical concern. However, the traditional curriculum has been regarded as having general application in all phases of life to the extent that it serves when needed in these vocational activities. But the present demand for a closer relation between school and real life has led school officials to make an earnest attempt to give more attention to various phases of life outside of school. The attempt, however, has reached scarcely further than the point of using vocational activities as instruments in teaching the traditional subjects. Such use is really a misuse.

This misuse appears in two aspects. First, hypothetical cases are invented with the honest intention of transforming the abstract problems in the traditional subjects into concrete problems expressed in terms of real life. Second, actual industrial activities are organized about some phase of the traditional subjects as a basis.

[1] See Chapter Fourteen.

The first aspect is illustrated in many of our school texts. In arithmetic there is found the " if " problem. The hare and hound problem used on page 165 is an excellent illustration — a purely hypothetical case, with the " if " implied.

" If a field is 320 rods long and 210 rods wide, how many feet of wire will it take to inclose the field, using four strands?" A sixth-grade boy in a frontier school in Arizona pointedly commented on such problems: " The teacher can't fool us with such problems. She just makes them up. We kids know there are no such fields; what's the use of working the problems? "

In English grammar the chief object is to inform the pupils on the structure of the English language. This is a difficult task, for boys and girls do not seem to be greatly interested in such a study. The author of the text recognizes this and seeks to relieve the situation by selecting sentences from well-known quotations or commonplace sayings. It is assumed that these quotations and sayings relate directly to real life. " He makes no friend who never makes a foe " is selected as an instrument in studying the pronoun.[1] The pronoun element is not the chief difficulty nor the greatest value in this statement. Real life is subordinated to serve a mere form in language.

The copy-book writing lessons in which pithy statements are copied over and over are clearly of this type. The hypothesis is this: We should learn to write well and we shall do this better if we write what is really valuable in thought, e.g., " Might makes right."

In drawing lessons we suppose the juicy apple, the fragrant flowers, the live frog, are more " practical " than pictures or casts, as models.

These hypothetical cases are judged of more value because they are supposed to be concrete and practical. In

[1] Milne, J. M., *An English Grammar*, page 130.

so far as the pupils do really pretend that these cases are real they probably are assisted somewhat in their study. But this influence must be very inconsiderable. Pupils are by nature too frank and honest to be thus fooled. Pupils respond to such hypothetical cases much as they do to the usual rule, principle, and drill exercises of schoolroom work. This is largely a perfunctory response.

A much greater misuse of vocational interests is found just where a greater use is intended. This is in the organization of real activities to serve as methods of teaching the formal and abstract school subjects. One of the best illustrations of this is the admirable effort of an Illinois superintendent to make his school work vital. This particular instance seems typical.

"The Mathematics of Arithmetic as an Instrument in Solving Life's Problems" was the title of a paper presented by H. A. Bone, once superintendent at Batavia, Illinois, at a meeting of the Superintendents' and Principals' Association of Northern Illinois, at Dekalb, May 1, 1914.[1]

". . . The purpose of learning the mathematics of arithmetic is to use it as an instrument in the solution of life's problems. . . . One of the first problems of the teacher is to make a survey of the lives of his pupils and of the life of his community to find situations which involve the mathematics of arithmetic. Such a survey of almost any community would reveal problem material from four main sources:

1. *Experiences of Children in the Schoolroom*]
   (*a*) Games . . .[2]
   (*b*) Apportioning of school supplies . . .
   (*c*) Reports of the school . . .
   (*d*) Counting time . . .

[1] See Report of Committee of Seven on an outline of a Course of Study on a Scientific Basis, Ninth Year Book, 1914.

[2] Space does not permit inserting details here.

2. *Experiences of Children Outside the Schoolroom*
   (*a*) Marketing . . .
   (*b*) Vocational problems of children . . .
   (*c*) Disposition of allowance . . .
   (*d*) Avocations . . .

3. *Experiences in the Home which Affect the Lives of Children*
   (*a*) The family income . . .
   (*b*) Supplementary family enterprises . . .

4. *Enterprises of the Community and Occupational Problems*
   (*a*) Taxes . . .
   (*b*) Expenditure of school district income . . .
   (*c*) Expenditure of city income . . .
   (*d*) Occupations:
      I. Business — Dry goods store . . .
      II. Mechanic arts . . .
      III. Professions . . ."

After this very suggestive outline with a good but brief statement of principles, Superintendent Bone gives a "list of problems taken at random from the plan books of teachers who are working on the problem of teaching children technique through the solution of problems taken from the environment of children." This statement is clearly contradictory to the one above, in which it was maintained that the purpose of arithmetic is its use "as an instrument in the solution of life's problems." In one case, life's problems are a means of studying arithmetic; in the other case, arithmetic becomes the means of solving life's problems. So it is in many schools: theory is very plausible, but practice falls far short. And very few school men and women see the difference.

The Francis W. Parker School in Chicago is regarded as one of the most progressive schools of the country. Great attention is given to the study of social and industrial activities as found in practical life. "The dynamic value

of interest in work is secured by presenting to the pupil subjects for study in some relation to his own life and experience. He is not asked to consider isolated mathematical abstractions, but taught to measure and compare actual dimensions and quantities." [1] But the work for the various grades is mapped out largely in terms of the traditional subjects. For example, under the subject of number, the requirements of children leaving the second grade are as follows:

1. All addition and subtraction combinations of numbers to be used. Those below twelve automatic.
2. Reading of numbers to one thousand.
3. Processes — addition (with carrying) and subtraction (without borrowing) with numbers of three figures, with the help of objects, e.g., money.
4. Fractions — one half, one third, one fourth of objects: one half of numbers up to twelve.
5. Standard measures — cent, dime, dollar; cup, pint, quart, gallon; inch, foot, yard.
6. Geometry — accurate ideas of square and rectangle.

The arithmetical problems presented by nature-study are many; some of them are simple and some of them are complicated, and all of them are illuminating. Seed distribution especially lends itself to computation; a milkweed pod contains 140 seeds; there are five such pods on one plant, each milkweed plant requires at least one square foot of ground to grow on; how much ground would be required to grow all of the seeds from this one plant? Or, count the seeds in one dandelion head, multiply by the number of flower heads on the plant and estimate how many plants can grow on a square foot, then ask a boy how long it would take for one dandelion plant to cover his father's farm with its progeny. . . . As a matter of fact, the teacher will find in almost every nature lesson an arithmetic lesson; and when arithmetic is used in this work, it should be vital and inherent and not "tacked on." [2]

These examples illustrate what is found, to a much less extent, in a large number of our more progressive elemen-

[1] Catalogue, Francis W. Parker School, 1911–1912, page 5.
[2] Comstock, A. B., *Handbook of Nature Study*, page 19.

tary schools; i.e., the organization of concrete experience about the traditional studies as centers. And this practice is supported by the theories of our leading educators.

Writing upon *Mathematics in the Elementary School*, Professor F. M. McMurry sets forth two "Controlling Ideas throughout the Curriculum." "The teacher's first aim is the excitement of a deep interest, possibly love, for these fields of human experience. . . . When it comes to the subject matter, those topics must be chosen which are capable of arousing interest. . . . But . . . there is . . . a second controlling idea for selection. The subject matter in each of those studies must reveal some side of life, and do it in such a way that the pupil feels forcibly the relation between it and practical living." [1] Practical living as a normal experience is one thing. Practical living which must be *revealed* by subject matter in some school study is probably quite a different thing.

"The problems in arithmetic, the materials for science study, the objects or projects for industrial arts work, the concrete interpretative materials for history and geography, must come from the local environment, and permit of direct adjustment to the children being taught." [2]

"Arithmetic is taught both for its usefulness in daily life and for the training that it gives the mind in reasoning, in habits of application, and in exactness of statement.

"In particular, the daily industries of our people should be drawn upon to the making of arithmetic interesting, informational, practical." [3]

"An examination of the leading topics in history, geography, literature (reading), elementary science, and mathematics will bring out the truth that they all spring from

[1] *Teachers College Record*, Vol. 4, No. 2, pages 2, 3.
[2] Dutton and Snedden, *Educational Administration in the United States*, page 328.
[3] Smith, D. E., *Teachers College Record*, Vol. 10, No. 1, pages 36–37.

common sources or centers. In one sense, they are not distinct studies, but phases of great topics common to all studies. The Revolutionary War, for example, is a common center from which history, literature, geography, drawing, language, and even mathematics draw important lessons." [1] And yet Professor McMurry has elaborated more than any author on the organization of these great topics of real life in terms of the traditional studies.

A third aspect of this misuse of experience may be only mentioned. It is the situation of allowing too little credit — in the field of general education — for experience. A farm boy is absent a day or so for "butchering" or for harvesting. He is too frequently debited on his school account. A boy or girl may by travel or otherwise have a really rich experience for a whole year. He falls back one grade in school. Probably in neither case are educational values adequately weighed.

But a reaction has appeared in favor of recognizing such experience. Credits are allowed for home work. Yet it must be also noted that these outside credits are on "studies" not considered worth while as a real part of the school curriculum. It is, to a large extent, a pretense at making the school stand for the practical and concrete in life, whereas the real work of the school is quite limited to the traditional formal subjects.

Interpretation of this response. One word may be offered by way of interpretation of the practices which are here opposed. Consciously or not, most teachers make use of the Herbartian principle of apperception. "From the known to the unknown" has guided many a teacher. The general notion as the goal of instruction [2] is quite unknown to the pupils, but certain commonplace experiences are

[1] McMurry, C. A., *Course of Study in the Eight Grades*, page 23.
[2] McMurry, F. M., *The Method of the Recitation*, pages 51–63.

known. These experiences are used as a means of reaching (verbally) the goal (as seen by the teacher). Here is the source of most of the fads and frills in school methods. The misuse of games and industrial activities must be classed as fads and frills. Such school practice merits the criticism that we are giving the pupils sugar-coated pills. Current periodical literature, touching upon schools interests, offers just such sugar-coated pills, for example: "The making of real problems: Have children collect prices of things at the country store. Keep these lists in note-books. From them problems involving fundamental operations may be made. The child makes his own problem and solves or makes problems for another class to solve. Have him make an original problem of community interest, as in corn growing and selling. Have made a household problem, as regards the cost of making rice pudding, cake, fudge, etc. . . ." [1]

This theory and practice illustrated by the few citations above is clearly in line with recent and current demands upon the school for greater efficiency. This demand is represented by the titles of a few recent books: *The Worker and the State*,[2] *Educational Readjustment*,[3] *Education for Efficiency*,[4] *The Concrete and the Practical in Modern Education*,[5] *School Efficiency Series*,[6] *The People's School*,[7] *Education for Citizenship*,[8] *Village Improvement*.[9]

This far-reaching and increasingly insistent demand is merely that the schools contribute more directly and more potently in making boys and girls more efficient in the real activities of life: not brighter scholars in school, but more effective workers in whatever they undertake in real life. If a more extended and more thorough knowledge of arithmetic, grammar, and geography is assuredly the straight

[1] *Ladies' Home Journal*, February, 1913, page 46. [2] Dean, A. D.
[3] Snedden, D. [4] Eliot, C. W.; also Davenport, E.
[5] Eliot, C. W. [6] Hanus, P. H. (editor). [7] Weeks, Ruth.
[8] Kerschensteiner, G. [9] Farwell, P. T.

road to greater efficiency, their present use should be continued. In such a case the logic of the situation would be this: John is likely to become manager of a shoe factory, or other such industry. He is required to become proficient in arithmetic, geography, language. But, to illuminate these so-called studies, the boy is provided with problems and other isolated bits of information about the shoe factory or other industry. Thus, in connection with his study of fractions the pupil gets a little of what may be called the "arithmetic of the shoe factory"; in his study of the geography of the New England States he gets some geography of the shoe factory. But clearly this industry is not at all satisfactorily understood and appreciated in terms of the schoolroom studies.

The *tendency* in educational theory and practice is decidedly in the line of a direct study of the activity — in its own terms not in terms of the common school studies. Studies in the processes of learning; studies in the tastes, interests, abilities of children; studies in social problems; all strengthen the natural *tendency* to attend to the particular things, the specific environment with which our adjustment is concerned.

Life values and school values. In real life, the arithmetic, and the geography, of the industry are incidental. Ability to compute is an instrument in the hands of the manager in directing the industry. Arithmetic is subordinate to management. The factory is not instituted for the purpose of providing opportunity for arithmetical calculation. But just this principle is practiced in our present school work. The industry is picked to pieces and isolated portions used in an effort to illuminate a formal school subject of less value. There might arise here a question of relative values, but the superiority of the one seems too evident to call for discussion.

What has been presented in this section called the *misuse*

of experience amounts to a real abuse of that experience. Present school practice is really humiliating social and industrial activities to a position of serving formal studies, which in real life are subordinate. This abuse or misuse is not so intended by school men and educational leaders. If the above analysis is correct, the situation is due to a strong conservatism in the community which makes it almost impossible to set aside the traditional studies, or to an indifference among school leaders toward an inconsistency which allows theory to call for a study of real life but demands in practice an adherence to the traditional subjects. This indifference may be due to a low educational standard or to lack of professional courage.

EDUCATIONAL CONSIDERATIONS FAVOR THE CONCRETE

In this chapter the position is taken that, in place of arithmetic, grammar, geography, and other of the traditional subjects, studies should be taken directly from social and industrial life and that they should be expressed in terms of that life. In other words, it is advocated that pupils in the elementary schools study directly their environment and the activities of people. This position is thus far based upon the evidence that there is an increasing demand that American youth be provided with the ability *to do*, not simply to know, and that this demand is made by educational organizations, men of affairs, and industrial establishments. It has been noted that school officials have tried to comply with this demand, but in their effort some have misused the activities of real life as mere instruments in teaching, and others have increased the already congested curriculum by adding studies of an industrial nature without removing any of the traditional work.

There are further considerations that support the principle that the curriculum should be selected directly from real

life and should be expressed in terms of the activities and environments of people.

The child's interest in the concrete. It is most natural that children observe particular events in their experience, and particular objects in their environment. A boy returns from the circus or the county fair. His report is an unorganized enumeration of disconnected details. And yet how constantly he uses the little conjunction "and," which merely connects the series of individual events narrated. He does not generalize upon the various phases of circus or fair — he singles out the details. Indeed, this was his method of observing and of enjoying. Further evidence of the boy's nature to refer to particulars is seen in his definitions: "Nail is something to put things together." "Open is if the door is not closed." "Opera is a house where you see men and ladies act." "Quarrel is if you began a little fight." "Saw is if you see something, after you see it you saw it." "Vain is if you always look in the glass." "A knife is to cut meat." "A clock is to see the time." "An arm chair is to sit in." "Village means one sees everybody pass." [1]

There are really neither generalizations nor abstractions in such definitions. A boy has definite objects of reference. Yellow is not a color — in the abstract — but is the color of a little dog, a big sunflower, or an orange.

A fraction is not "one or more of the equal parts into which a unity is divided"; to the boy it is the larger part of the apple which the other fellow took.

All this view of things is perfectly reasonable. In the first place, such are the normal experiences which the boy is having constantly. He is coming in contact with real things. As a youth he is largely an organism for receiving sensations from the objective world about him. He sees

[1] Quoted by Chamberlain, A. F., *The Child*, pages 146, 147.

particular objects; he hears individual sounds; he feels this and that in his experience. Before entering school the boy does not think in terms of arithmetic or arithmetical generalizations. Yet he has many quantitative experiences fully understood by him. During school years when he is out of school his experience is normally very similar to what it was before he went to school. He experiences concrete situations.

Moral training. This interest of the child in the concrete is vitally connected with his moral training. There is an increasing demand that the school train the youth to act uprightly in the community. How is this to be effected? In his discussion of some of the principles underlying the famous continuation schools of Munich, Kerschensteiner[1] points out that whenever the school is asked to undertake a new departure, whether intellectual or moral, the schoolmaster immediately sets about his work with oral instruction. Knowledge of civics is not the school boy's pressing need, but acquaintance with civic virtues in particular phases of life. Civic instruction as given in the continuation schools of Munich was probably not surpassed in any other school. It was not only the civic training in the shop work of the schools, but also the study of particular phases of social and industrial life that made those schools so effective in training for citizenship. In the forty-six distinct continuation schools of Munich " Lebens und Burgerkunde " (knowledge of life and citizenship) was one of a very few studies common to all, though the subject matter differs in the various schools. In the school for the interior house decorator, for example, the purpose in this subject was to afford the student an insight into the " satisfactory conduct of life."

Our older schools have attempted to teach virtues by the story with " moral " attached. F. J. Gould, once employed

[1] Kerschensteiner, G., *Education for Citizenship*, pages 97–110.

by the Moral Education League of London, has toured this country telling stories intended to give moral ideas which he believes will express themselves in action.[1] The Golden Rule Series [2] gives many stories similar to those contributed by Mr. Gould.

It is interesting to note how the same subject is used to teach two lessons. In a little poem by Anna B. Warner Daffy-down-dilly is personified making her way into the light in early spring. The poem closes with:

> "O Daffy-down-dilly, so brave and so true!
> I wish all were like you! —
> So ready for duty in all sorts of weather,
> And loyal to courage and duty together!" [3]

In another story by Hawthorne Daffy-down-dilly is pictured as a little boy " because in his nature he resembled a flower and loved to do only what was beautiful and agreeable, and took no delight in labor of any kind." Daffy-down-dilly's mother sent him away to school. The teacher was Mr. Toil. Daffy-down-dilly was so displeased that he ran away. After a great many experiences in which he was unable to escape this Mr. Toil, he returned to school. He had " learned a good lesson, and from that time forward was diligent at his task, because he knew that diligence is not a whit more toilsome than sport or idleness." [4]

Whatever influence those stories have in the development of moral and civic virtues is probably to be found in the concreteness of the experience related in the story. The most effective stories are probably those that relate experiences which are very close to the everyday life of the

[1] See his books: *Life and Manners, Stories for Young Hearts and Minds.*
[2] A set of readers published by The Macmillan Company.
[3] The Golden Rule Series, Vol. I, pages 23–25.
[4] *Ibid.*, Vol. IV, pages 43–57.

community in which the children live. But the direct study of social and industrial activities brings the pupil face to face with moral issues. Here he meets actual conditions, not theoretical situations. Under such conditions moral fiber is developed.[1]

The vital curriculum. Natural interest in the concrete and moral fiber expressed in conduct point to the further position that school work can be effective training for real life only to the extent that the content of its own work is identified with life outside of school.

The Portland course of study as given in 1912–1913 is outlined in fifty-four parts. The work of each half year is divided into three parts — or each grade into six parts. There are nine grades in the elementary schools. These fifty-four parts are divisions of the traditional studies — marked off largely by pages in the various texts. In the report of the survey of these schools Frank E. Spaulding, expert on courses of instruction in this survey, was led to point out the characteristics of a "dead" curriculum and a "live" one. He refers to this Portland curriculum as "vivisected into fifty-four dead pieces." The living curriculum is "plastic and adaptable, constantly undergoing changes in emphasis of its various parts, even to the elimination of some entirely and the substitution of others . . .; the living curriculum serves as readily and as well the child whose mental processes depend on concrete things, as that one who readily grasps abstract ideas; the living curriculum serves the present needs of every pupil, whether those needs be the preparation for the next steps that will lead in due time through a college preparatory course to college, university, and a professional career, or whether those needs are for skill of hand that will enable a youth to support

[1] Compare view of Professor F. C. Sharp, expressed in an article, "A Course in Moral Education for the High School," in *Religious Education* for June, 1913.

himself honorably, within a year, by rendering some worthy service to the community." [1]

A great deal is said and written about *infusing* life into the curriculum. Vitalize the arithmetic; arouse interest in the reading; make real the study of geography — such are the advices and the injunctions so frequently given to the rank and file of teachers. There is apparent in such statements an undeniable implication that arithmetic is in itself dead; that reading as such is without interest; that geography as usually presented is not real. There seems to be this almost universal assumption: We have these lifeless, uninteresting, unreal subjects; they constitute our school curriculum; the more lifeless, uninteresting, unreal they are, the greater is the opportunity of the teacher to show tact and ingenuity in teaching. The burden is thrown upon method. Method resorts to devices. Some devices are much more potent than others. Experience in the schoolroom seems to indicate that one of the most effective devices in the "vitalizing" of any "dead" subject is to be found in the use of experiences in real life. In many texts these experiences are virtually used as applications of principles. Concrete activities are now used as a means in instruction. Earlier in this chapter such use was referred to as a misuse. By such means the traditional subjects are not vitalized — at least not for the pupil. Arithmetic has never been live in the sense of being a vital part in the natural experience or environment of children of school age. Arithmetic consists of principles and processes that may assist children in their experiences of a quantitative nature. Those experiences are *vital* by nature; the arithmetic cannot be vitalized. The same may be said concerning the other subjects in our traditional curriculum.

[1] *Survey of the Public School System, City of Portland, Oregon*, 1913, pages 98, 100.

The really *live* curriculum must consist of the real concrete activities of life. Here is where thorough consistency usually breaks down. The increasing demand for the concrete and practical in education is answered in school practice not by a direct study of the concrete and practical in life, but by *using* such only as an instrument in the impossible attempt to *vitalize* the traditional subjects. But how reasonable it is to study directly the things about which we wish to know more, because such things affect us! Apprenticeship schools in various industrial institutions are a good illustration. In the apprenticeship school of the New York Central Railroad, a boy who anticipates work in boiler making, for example, studies: [1]

Heating rivets, etc.	3 to 6 months
Light sheet-iron work	12 to 15 months
Flue work	3 to 6 months
Riveting, chipping, calking, and staybolt work	12 to 18 months
Flanging and laying out	1 to 3 months
General work	6 to 12 months

Likewise the merchant studies his mercantile business, the manufacturer his industrial business, the engineer his engineering business, the farmer his farming business. Men of practical affairs study the things of vital concern to them.

Boys and girls in the elementary school are not yet ready to learn a trade; they are not yet called upon to perfect their business. Their needs are of a more elementary and diversified nature. Chapters Thirteen to Sixteen present four groups of these activities and Chapter Seventeen outlines in some detail a few of these activities. These are the things which seem of real consequence to boys and girls of school age. They are the things that constitute a "live" curriculum: live because they vitally affect the everyday experience of children.

[1] Report of United States Commissioner of Labor, 1910, page 151. Much in this report is very suggestive in this connection.

Three other considerations support the thesis of this chapter. They will be but briefly stated here and more fully discussed in Chapter Eleven.

Relative values. A curriculum in terms of the concrete and the practical simplifies the perplexing problem of relative value of the formal subjects and also simplifies the kindred problem of thoroughness. Discussion of these two problems in earlier and in recent years has been almost futile by reason of lack of standards of sufficiently fundamental character to warrant conclusions reached.

Correlation and organization. A curriculum in terms of the concrete and the practical very considerably simplifies the problem of correlation and organization of school subjects. The nature of such a curriculum makes correlation a problem of normal relationship and reduces organization of subject matter to a mere series of topics for study.

Independence of units of work. A curriculum in terms of the concrete and the practical provides for an independence of the work of any one year. No one topic is a prerequisite for any other. This means much to the satisfaction of pupils who vary from the normal in school and reduces to a very minimum the problem of retardation now claiming so much attention.

THE CONCRETE NOT A REJECTION OF THE THREE R'S

In closing this chapter, the reader may be cautioned against a possible misinterpretation. A curriculum in terms of the concrete and the practical would not mean a rejection of arithmetical, geographical, or linguistic subject matter in school work. A pupil's understanding of quantity, of language, and of geography would probably be more extensive and more effective by reason of the stronger motive under which this work was done. These are his tools in studying real life. This chapter calls for a change

in viewpoint. The school should be concerned primarily with specific activities in social and industrial life.

Traditional Three-R subject matter is not to be ruthlessly cut out of the curriculum merely because it is traditional. It must be placed on a par with subject matter taken directly from real life, *in so far* as it functions in the equipment of boys and girls for community life. However, as has been pointed out, the subject matter taken directly from life activities contributes more, and that more directly, to preparation for participation in real life than do the traditional subjects. That which contributes less must yield to that which contributes more in the equipment of children for their work and play activities. The relative values of these two types of subject matter must be determined by their service in real life, and this in turn determines the relative position in the curriculum.

The traditional, formal Three R's are strictly subordinate. From the point of view of method, instruction in these formal subjects is incidental to instruction in the concrete and practical affairs of everyday life.

Supplementary Readings

Cooley, E. G. *Vocational Education in Europe*, pages 11–30, 329–336.
Davenport, E. *Education for Efficiency*, pages 11–36, 60–120.
Densmore, E. *Helping School Children*, pages 280–320.
Dutton, S. T., and Snedden, D. *Administration of Public Education in the United States*, pages 314–340.
Eliot, C. W. *The Tendency to the Concrete and the Practical in Modern Education*, pages 1–57.
Hanus, P. H. *Beginnings of Industrial Education*, pages 3–52.
Kerschensteiner, G. *Education for Citizenship*, pages 97–110.
Puffer, J. A. *The Boy and His Gang*, pages 39–82.
Report, Bureau of Labor Statistics (New York), 1908, pages 190–242.
Report, Commissioner of Labor (United States), 1911, pages 377–407.
Report, Commission on Industrial Education (Massachusetts), 1908, pages 7–93.

ROBINSON, J. H. *The New History*, pages 132–153.
RUSSELL, J. E. "The School and Industrial Life." *Educational Review*, Vol. 38, pages 433–450.
SNEDDEN, D. See Johnston, C. H., *The Modern High School*, pages 20–41.
WEEKS, RUTH. *The People's School*, pages 38–56.

General References

BARROWS, G. H. *The History of Springfield for the Young.*
BLACKFOOT, K. M. H., and NEWCOMB, A. *The Job, the Man, the Boss.*
DEAN, A. D. *The Worker and the State.*
ELIOT, C. W. *Education for Efficiency.*
LEAVITT, F. M. *Examples of Industrial Education.*
MCMURRY, C. A. *Course of Study in the Eight Grades.*
Ninth Yearbook Superintendents' and Principals' Associations of Northern Illinois, 1914.
PUFFER, J. A. *Vocational Guidance.*
Report on Vocational Training in Chicago, 1912.

Statement Outline for Chapter Ten

Though there is no average boy, emphasis is placed upon averages and standards.

Uniformity in the traditional curriculum is conspicuous.

- School subjects, topics, and textbooks are uniform in most school systems.
- Recitations and examinations tend to uniformity.
- This uniformity is largely the result of administrative economy.
- This uniformity is harmful to pupils.

Individual differences are of increasing importance.

- Pupils show striking differences in schoolroom behavior.
- Psychological differences are marked.
- The importance of individual differences is seen in social adjustments.
- Recognition of this importance demands changes in school work.

Various plans have been made to provide for individual differences.

- The elective system is only a partial provision.
- Special and industrial schools do not reach the masses.
- Differentiation in the uniform subjects is inadequate.

The importance of individual difference calls for a more radical and extensive provision.

- Studies in terms of life activities are needed.
- Schoolroom method must be more natural.
- The standard must be the individual's best, not the average of the group.

Effective school work calls for this practical treatment of individual differences.

CHAPTER TEN

The Curriculum and Individual Differences

PRINCIPLE THREE

The curriculum should provide for great scope and flexibility to meet individual differences in interests and abilities.

THE GENERAL SITUATION

There is no average boy. And yet a great many of our studies and reports indicate the belief in such an individual. More respectful consideration is paid to the "average" pupil than to his superiors or inferiors. He serves as a standard. By this standard work is arranged, and by this standard the results of work are estimated. This consideration for the average carries with it a quiet implication that if all pupils could rank close to the average, the situation would be highly satisfactory.[1] Such uniformity on the level of the average would gratify teachers. How frequently, when such opportunity is offered, does the teacher take pride in the uniformity of her class! Such a group, so well mated, works well together, and the teacher is relieved of the trouble of perplexing variations of the stronger, the weaker, and the diversely inclined.

But studies in the principles underlying adjustment are leading the student to question the advantage of such uniformity. Social and industrial changes call more and more for the individual who is specially prepared for a given place of opportunity and responsibility. Less credit is thus given to uniformity, though it must not be overlooked that people

[1] In Bulletin Number Four of the Courtis Standard Research Tests, Mr. Courtis takes the position that the "desired level of ability" is expressed in the standard score or the average of attainment in a particular exercise engaged in by thousands of pupils.

have a large number of adjustments in common. These recent studies and these new social demands are making vigorous protests against the prevailing thought and custom in this educational matter. Uniformity and variation in elementary school training become a vital question.

UNIFORMITY IN THE TRADITIONAL SCHOOL

It may seem unnecessary to point out evidences of uniformity of school work in the traditional school. Uniformity is often the basis for attacks upon the school; it is no less the basis for many compliments. On each side there is probably too little appreciation of the nature and extent of this character of the traditional school.

School subjects. The Three R's is the proverbial nickname for the traditional course of study. Readin', 'ritin', and 'rithmetic have been prominent in every school for generations. An examination of courses of study in various cities in this country reveals a striking uniformity in these various school systems. Table IV shows the various subjects pursued in the eight grades in eleven cities,[1] and the percentages of total time given to each of the subjects.

It is very evident that these eleven cities have practically the same subjects in the curriculum. The *a*, *b*, *c* indicate slight variations. But these variations are essentially in name only, or in organization. The content of the work done is not appreciably different in Boston because spelling, grammar, and writing are included in language. In three cities elementary school science does not appear. Were uniformity not so characteristic we might expect more subjects missing in some cities, and quite other subjects than these listed substituted.

[1] *Elementary School Teacher*, Vol. 10, page 313, 1910.

TABLE IV

SCHOOL SUBJECTS AND TIME ASSIGNMENTS

	Boston	New York	Chicago	Rochester	Cincinnati	Indianapolis	St. Louis	Milwaukee	Kansas City	San Francisco	Cleveland	Average
Reading	26.25	32.50	40.26	17.77	14.13	17.80	17.90	22.79	14.50	30.93	26.31	23.74
Spelling	*a*	*b*	*b*	5.28	9.57	5.33	6.39	8.07	10.70	5.23	5.94	7.06
Grammar	*a*	*b*	*b*	2.39	3.25	2.16	*a*	*a*	*a*	*a*	3.63	2.85
Lang., comp., and suppl. reading	20.14	*b*	*b*	7.98	11.37	18.03	10.05	13.27	11.20	10.56	12.18	12.75
Writing	*a*	5.81	4.88	5.08	5.41	7.86	11.05	6.86	9.66	3.77	5.73	5.71
Arithmetic	16.41	13.40	11.02	18.60	18.78	11.97	14.98	14.71	15.10	16.59	16.40	15.26
Geog. — hist.	10.06	10.77	9.65	16.95	13.28	9.66	11.50	9.55	14.10	12.82	9.36	11.60
Music	4.47	4.85	6.37	4.79	4.87	6.85	8.18	6.92	6.60	5.38	5.46	5.88
Drawing	6.85	8.90	6.95	4.78	6.05	9.45	9.98	6.92	11.50	4.52	4.91	7.34
Man. train.	6.15	4.65	9.85	7.83	2.16	2.16	2.38	6.23	*c*	1.80	4.73	4.79
Phys. training, physiol., and hygiene	7.09	13.05	5.17	6.57	7.40	8.65	5.32	4.61	4.00	5.23	5.31	6.58
Elem. sch. sci.	2.51	6.01	5.80	1.99	3.79	..	2.92	..	3.11	3.11	..	3.65

a, included in language; *b*, included in reading; *c*, included in drawing.

This uniformity in subjects is striking, but it is yet more so when account is taken of the relative time devoted to the various subjects. For the sake of closer comparison between the eleven cities, Table IV is rearranged slightly by distributing the time so that *a*, *b*, *c* have time percentages assigned.[1] This gives Table V.

In commenting upon Table IV, Elson and Bachman assert: "There is considerable variation, it will be observed, in the value accredited the same subject in different cities. . . ."[2] But this variation is not so great as may at first appear. In Table IV Chicago allows 40.26 per cent of scheduled time to reading against 14.13 per cent allowed in Cincinnati. But include in the latter case spelling,

[1] This is done by distributing the percentage of time according to the average per cent given in the right-hand column.

[2] *Elementary School Journal*, Vol. 10, page 313.

grammar, language, composition, and supplementary reading, as in Chicago, and Cincinnati is credited with 38.32, which is close to 40.26. Inasmuch as all of the reading, writing, and other language subjects are in most schools considerably correlated, it is just to combine all of these for comparison of time devoted by these eleven cities. This combination gives Table VI.

TABLE V

SCHOOL SUBJECTS AND TIME ASSIGNMENTS

	Boston	New York	Chicago	Rochester	Cincinnati	Indianapolis	St. Louis	Milwaukee	Kansas City	San Francisco	Cleveland	Average
Reading . .	26.25	16.61	20.62	17.77	14.13	17.80	17.90	22.79	14.50	30.93	26.31	23.74
Spelling . . .	5.01	4.94	6.12	5.28	9.57	5.33	6.39	8.07	10.70	5.23	5.94	7.06
Grammar . .	2.02	2.00	2.47	2.39	3.25	2.16	1.82	2.44	2.05	1.94	3.63	2.85
Lang., comp., and suppl. reading . .	9.04	8.92	11.05	7.98	11.37	18.03	9.98	10.83	9.18	8.58	12.18	12.75
Writing . . .	4.04	5.81	4.88	5.08	5.41	7.86	11.05	6.86	9.66	3.77	5.73	5.71
Arithmetic . .	16.41	13.40	11.02	18.60	18.78	11.97	14.98	14.71	15.10	16.59	16.40	15.26
Geog. — hist. .	10.06	10.77	9.65	16.95	13.28	9.66	11.50	9.55	14.10	12.82	9.36	11.60
Music . . .	4.47	4.85	6.37	4.79	4.87	6.85	8.18	6.92	6.60	5.38	5.46	5.88
Drawing . .	6.85	8.90	6.95	4.78	6.05	9.45	9.98	6.92	7.16	4.52	4.91	7.34
Man. train. .	6.15	4.65	9.85	7.83	2.16	2.16	2.38	6.23	4.34	1.80	4.73	4.79
Phys. training, physiol., and hygiene . .	7.09	13.05	5.17	6.57	7.40	8.65	5.32	4.61	4.00	5.23	5.31	6.58
Elem. Sch. sci.	2.51	6.01	5.80	1.99	3.79	..	2.92	..	3.11	3.11	..	3.65

TABLE VI

READING, WRITING, AND LANGUAGE COMBINED

Boston	New York	Chicago	Rochester	Cincinnati	Indianapolis	St. Louis	Milwaukee	Kansas City	San Francisco	Cleveland
46.39	38.31	45.14	38.50	43.73	51.18	45.39	50.99	46.06	50.49	53.79

The uniformity which is significant is this: the various cities devote approximately the same relative amount of time to the various subjects. We do not find one school devoting a large portion of time to spelling, or a small portion to reading. No school devotes much time to geography and little time to arithmetic. Further evidence of this uniformity is seen in the average time devoted to the various school subjects in representative cities in the United States. Table VII shows this. There is a striking uniformity in these three periods, 1904, 1910, 1915 — even more than is at first apparent, since the sums of percentages in 1910 and 1915 are 107.21 and 110.5, respectively, in place of 100. This means that all of the percentages for these two years should be slightly reduced.

TABLE VII

TIME ASSIGNMENTS IN 1904, 1910, AND 1915

ASSIGNMENTS	1904[1]	1910[2]	1915[3]
Opening exercises	3.1		
Reading	20.7	23.74	26.3
Writing	4.7	5.71	5.9
Spelling	4.7	7.06	7.4
Language, grammar, supplementary reading, composition	14.4	15.60	13.8
Arithmetic	17.3	15.26	15.9
Geography	7.2	11.60	7.7
History	4.8		5.8
Elementary science	3.4	3.65	4.5
Physiology, physical training	5.4	6.58	5.5
Drawing	6.4	7.34	6.7
Music	5.1	5.88	5.9
Manual training	2.4	4.79	5.1
	99.6	107.21	110.5

[1] Taken from Payne, B. R., *Public Elementary School Curricula*, page 39.
[2] Taken from *Elementary School Journal*, Vol. 10, page 313, 1910.
[3] Taken from the Fourteenth Year Book of the National Society for the Study of Education, page 25, 1915.

School topics. Uniformity is further seen in the subtopics or analysis of each of the school subjects. In arithmetic, for example, in the school systems referred to in the previous section, topics such as addition, division, denominate numbers, fractions, and percentage are taught uniformly and receive the greatest emphasis in certain grades.[1]

Textbooks. The textbook is one of the factors of greatest influence upon uniformity in school work. It is to be feared that most teachers follow the text slavishly. However adequate the explanations for this practice may be, the effect is to require all to do practically the same work. Thus, the fifty pupils under one teacher are treated as one. Moreover, in any district or city one text is used throughout the schools. In too many cases the uniformity called for by the text itself is yet more emphasized by the assignments of work that come from superintendent's or supervisor's office. These assignments stipulate, often by page references in the texts, the amount of work to be done in a given time. Fortunately this is becoming less common in public schools, but an examination of school reports and courses of study convinces one that this practice is still quite prevalent. This means that not only the pupils of a given grade in one school conform, but all pupils of that grade throughout the district or city must also conform. County adoptions of texts undoubtedly have this effect. State-wide adoptions extend very considerably this influence.

One principle underlying this extensive use of selected texts is probably found in the belief in minimum essentials in the traditional common branches. The Fourteenth Year Book (1915) of the National Society for the Study of Education presents the problem of "Minimum Essentials in Elementary School Subjects." This volume makes reports of various current practices in the formal subjects, a variety

[1] See Payne, B. R., *Public Elementary School Curricula.*

of texts, and a few experiments in the study of means of ascertaining what should be the minimum essentials. It seems to be assumed throughout that there should be minimum essentials in these traditional subjects. And, doubtless, this assumption is quite generally made. On this basis it may readily be expected that the textbook will express the consensus of opinion as to these essentials.

The recitation. The nature of the recitation is largely determined by the subject matter and the prevailing notion as to the purpose of the recitation. Here is another instance of uniformity in the traditional school work. The foregoing sections have pointed out the uniformity in subjects and texts. In the conduct of the recitation there is unquestionably a variety of methods employed, such as the so-called inductive, deductive, developmental, review, drill, topical, and lecture methods. But probably the prevailing "method" is that of "hearing textbook lessons." This method is essentially a question and answer recitation. The immediate purpose on the part of the teacher is to ascertain what the student has accomplished on the work assigned.[1]

Dr. Ernest Horn has made a careful study of "Participation among Pupils in Classroom Recitations."[2] That portion of this study which presents the relationship between the pupil's ability in various subjects (as judged by the teacher) and the amount of participation by the pupil in these subjects shows great uniformity:

"*Inequality of Distribution by Subjects.* It is especially significant that the greatest equality of distribution should lie with those subjects which are most adaptable for formal treatment and pure memory work. For the most part, these

[1] An excellent stenographic report and discussion of the recitation is found in Stevens, Romiett, *The Question as a Measure of Efficiency in Instruction.*

[2] Horn, E., *Participation among Pupils in Classroom Recitations,* 1914.

subjects have been long in the curriculum, so that teachers through a period of many hundred years have perfected and handed down mechanical procedures and devices for securing an equable distribution. . . . With the modern tendency to increase the amount of problematic organization in the curriculum; to demand that the course of study be tied up with life outside the school; to insist that the pupil make out his own problems, and that he develop æsthetic and ethical appreciation; the problem becomes increasingly important. That we have not reached a satisfactory solution is evidenced by the fact that the two schools which are perhaps among the foremost of the country in setting up these new standards (Schools IV and XVI) are among those in which the inequality of distribution of opportunity for participation is greatest." [1]

Various theories as to the method of conducting the recitation imply uniform treatment of all pupils in that no definite variations in methods are suggested for the individuals who differ. Such theories seem well carried out, if one may judge from Horn's tables.

Examinations and standardization. State examinations required of pupils throughout the state cannot but tend to make school work uniform for all pupils. The same must be said of county, city, and even of individual room examinations. Examinations continued for some time tend to set up forms for all alike. Pupils soon learn for what to prepare. The strong and the weak attempt practically identical work.

The standard tests so rapidly developing in recent years are having a great influence in making more uniform the work of pupils. These tests are virtually developing certain very

[1] Horn, E., *Participation among Pupils in Classroom Recitations*, pages 36–37. School XVI is the University Elementary School at the University of Missouri.

definite standards in the various subjects for particular stages of a pupil's advancement. These standards will really fix the "minimum essentials" in such subjects. This means that schools, teachers, and pupils will endeavor to reach such standards. To reach those standards and go no further means uniformity. The improbability of students advancing beyond those standards is indicated in a statement by one of the leaders of the standardization movement: "I was astonished to find, in checking up the time cost for one class of 20 pupils, that the total time set free in 12 weeks by excusing those who had reached the standard amounted to 1460 minutes, or 13 per cent of the total time given by the class to the drill work. Other classes gave similar results." [1]

Classification of students. About a decade ago it was discovered that pupils in our public schools were making progress through the grades at varying rates. Not many were accelerated in their progress, but a large percentage were retarded one or more years. This variation seemed a serious defect of the school and in recent years strenuous efforts have been made to lessen greatly the variation in rates of progress. Various means and devices have been used and with evident effect. The slow, indifferent, and even incapable student is somehow being brought up to the standard, though the percentage of retarded pupils is still very high.

Explanation of such uniformity. Those who are responsible for much of this uniformity in school work, especially the advocates of the standardization of school work, believe that by this means the general average of accomplishments is raised. The amount of work done is measured by the general average. Individual differences are largely disregarded. It is believed, further, that comparisons are

[1] Statement by S. A. Courtis, quoted in Report of the Commissioner of Education, 1915, Vol. I, page 36.

facilitated when work is of a uniform order. This is an age when comparisons are stressed. Schools vie with one another; pupils meet in sharp competition. School administrators and teachers find great satisfaction in attaining to the standard set by another school or in proving superior to that school. Pupils' work in arithmetic cannot be compared with other pupils' work in geography; nor the work in the "applications of percentage" with that in long division. Thus considerable satisfaction is found in securing common grounds on which competition and comparison can be carried on.

Classification, promotion, and transference of pupils are greatly simplified when such pupils have been engaged in works of a uniform nature and extent. In large city systems there is much transferring from one school to another. This administrative problem is greatly simplified if the corresponding grades do identical work. This uniformity is secured by the use of common texts and the following of outlines from the superintendent's office, even to the pages in the texts.[1]

Moreover, the nature of the traditional curriculum makes uniformity of work most natural. The processes of division of integers and the multiplication of fractions are identical — or nearly so — in all schools. Language forms and grammatical constructions are uniform. Most of the studies in geography correspond closely in the descriptions of mountain chains, river systems, characteristics of cities, etc. As pointed out in an earlier chapter, the conventional curriculum is essentially one of principles and generalizations of universal application. Little deviation from the constant is possible. Illustrations, devices in method, and points of

[1] One of the extreme cases of this was reported in the school survey of Portland, Oregon. However, an examination of courses of study will show how prevalent this practice is.

application vary, but these are only incidental to the curriculum itself.

But perhaps the most satisfactory explanation for the uniformity in school work is to be found in the *habit* of the schools. Custom plays an important rôle. It is much easier to follow custom than to do work upon one's own initiative. Self-direction is more taxing. Uniformity is the line of least resistance. This educational habit, rather than professional insight, probably accounts for the introductory statement in the *Course of Study and Syllabus for Elementary Schools of New York State* (1910): "This course is general in character and adapted to all children until that period of their development when they manifest different interests, mental powers and tastes, which is usually at the age of 12."

Results of such uniformity. Opposed to such seeming advantages in uniformity, there are baneful results that cannot be overlooked. One of the most conspicuous of these is that teaching is made mechanical. Forty or fifty pupils are taught as one. A principle of the old monitorial system prevails, *memoriter* work for one and all. This practice results in essentially learning and drilling. "In short, freedom to grow, and positive aids to growth, are necessary alike for all teachers, both young and old, and poor and good. But this curriculum and these syllabi have neither allowed this freedom nor furnished these aids; and in these facts we find at least a partial explanation for the poor quality of class-room instruction."[1]

Again, the natural results of uniformity in the curriculum are a large percentage of retarded pupils. This astonishing effect was brought to our attention a decade ago. Various "cures" have been applied, and the amount of retardation has been reduced. But occasions for such cures must

[1] McMurry, F. M., *Interim Report, Committee on School Inquiry, City of New York*, 1911–1912, page 116.

continue until prevention has been secured through the discontinuance of a uniform curriculum for boys and girls who are not uniform.

It may be seriously questioned whether the uniformity of the traditional curriculum is not the cause of many of the social misfits in life. Think of the uniform school work and the great variety of employments into which boys and girls enter upon leaving school.[1] "One who goes out of the school system before the end or at the end of the elementary course is not only unprepared for any vocation which will be open to him, but too commonly he is without that intellectual training which should make him eager for opportunity and incite him to the utmost effort to do just as well as he can whatever may open to him."[2] "The school fails to hold the interest and attention of the average child, particularly of the average boy, because the school training has so little relation to the world in which the average man and woman are called upon to live and work."[3] In the *Vocational Education Survey of Richmond, Virginia*,[4] only one employer in the building trades suggested that general education was needed by the young employee. The most frequent demand was for specific training for particular trades. The *Vocational Guidance Survey of New York City* led to the conclusion that "general information is sorry comfort to a boy whose whole problem is specific."

INDIVIDUAL DIFFERENCES

School differences. The usual teacher wishes her forty or fifty pupils were all of one make. Her work would be so much easier. If all were to misspell the same words in a

[1] See *Vocational Education Survey of Richmond, Virginia*, for analysis of such employments.

[2] Draper, A. S., *American Education*, page 278.

[3] Nearing, Scott, *Social Adjustment*, page 59.

[4] Issued by the United States Department of Labor, 1916.

composition exercise, the reading and correcting of one paper would suffice for all. This teacher's futile wish is the more eager as the differences among her pupils are the more marked. These striking differences are often irritating — even exasperating — to the teacher, especially the one who thinks more of keeping school than teaching pupils. We readily notice great differences in pupils' industry. Some are studious, painstaking, and earnest in their work. Others are disposed to idle away their time, to be careless and unconcerned about their work. Some have real ability in studying, in learning, and in reciting. Others have not, though in this case they usually have ability in activities of quite another character. Some pupils show marked ability in arithmetic, but their rank is taken by others in the subject of geography. Such differences are readily noticed even in the same subject; some are capable in drill exercises in fractions, but are surpassed by others in problems for application. Some pupils make progress rapidly — if the system of promotion allows. Some make up the army of retarded pupils, one, two, three, or more years behind. Some pupils are circumspect in their conduct; others have " bad " deportment on their records. This means only that these pupils differ in their behavior, one group pleasing the teacher, the other displeasing her.

But such differences are too commonplace to warrant further details. It must be said, however, that the rank and file of teachers do not take the cognizance of such differences needed for the good of the pupils. The wish for uniformity is too nearly realized by arbitrarily treating the pupil as though any differences that do prevail are not to be taken into account.

Psychological differences. But there are individual differences of a deeper nature than those so commonplace in the school. There are marked differences in types of intellect.

Thorndike has divided these intellects into two classes, the *idea thinker* and the *thing thinker*.[1] The former thinks well in terms of the book, the latter in terms of the shop and other forms of objective life. There are differences in types of will and of temperament. There are great differences in interests; some are interested in play, others in work; some in wild animals, others in pets; some in machinery, others in the fine arts; some in constructive activity, others in pure idleness. Indeed, "The varieties of individuality are so great that psychology and child study can never tell teachers what they would most like to know — just how to deal with individual pupils. . . . the more she knows of how most human beings act and develop, . . . the more quickly and correctly will she be able to determine what is the best treatment for an individual child."[2]

But it is not important to point out here further differences or to discuss the nature of such. Teachers are referred to writings by Thorndike, Kirkpatrick, and others.

Importance of individual differences. It was noted in Chapter Six that among primitive people one individual counted for as much as any other. Indeed, any one individual was not essential to his group. There were scarcely any individual differences, practically no education, and little development. In recent years individual variations have become of great importance. "If symmetry is to be obtained by cutting down the most vigorous growth, it would be better to have a little irregularity here and there." (Agassiz.)[3] Adjustment is everywhere the present demand. In the variations taking place in this complex age, the individual must vary from the group that he may prepare himself for the particular niche in life which is his lot. In

[1] Thorndike, E. L., *Principles of Teaching*, page 87.
[2] Kirkpatrick, E. A., *Fundamentals of Child Study*, pages 315–316.
[3] Quoted in Search, P. W., *An Ideal School*, page 158.

just this is the essential nature of growth.[1] In a static civilization — which must be hypothetical, not real — such variation and growth would not be necessary. But the great changes taking place in modern life make changes in the individual imperative. The " survival of the fittest," even the survival of the fit, depends upon this principle of variation. And the usual school teacher — and superintendent — is too little concerned with this principle. Not until those in charge of schools appreciate far more than they now do the part variation plays in development and adjustment will our pupils be freed from the harmful régime of uniformity.

A second indication of the importance of this principle is to be seen in the greatly varied activities of pupils outside of school and the numerous occupations into which they enter after leaving school. If the school, in accordance with the policy advocated in this volume, emphasizes the helping of pupils in their present living, then there is a demand for greater variation in school work. If, as in the traditional school, preparation for complete living later is the aim, the provision for individual differences is no less imperative. Boys and girls, in their anticipations of real life, should demand of the school the opportunity of gaining an insight into possibilities through a great variety of present interests.

Quite subordinate to the above values, but yet of no small importance, is the pedagogical economy in taking into account the varying interests, aptitudes, and abilities of pupils. No less in school than in real life is attitude toward work and success in such work largely governed by purposes in the individual. Provide an individual with work that serves his purpose and his interests, and there is found at once a motive far more powerful than methods and devices so ingeniously or laboriously planned by the teacher. Here

[1] Judd, C. H., *Genetic Psychology for Teachers*, pages 98–160, 197–235.

again school teachers — and superintendents — are too unconcerned with the relation of individual differences to successful work. Uniformity is assumed to be the line of least effort in teaching — such is probably true in school-keeping. But effective teaching must take into account results as well as effort. With given results, i.e., a certain degree of efficiency, it is probable that less rather than greater effort of the teacher is needed when the work offers large opportunity for individual variations according to different interests. Not more effort is asked of the teacher, but greater effects of the effort expended. In a later chapter the relation between method and subject matter will be discussed, but it may be here noted that studied methods of teaching are necessitated by the uniformity of subject matter which meets the interests of so few. One word of caution, which is repeated in other places in this volume: The teacher should beware of using individual differences — i.e., interests — as means of securing an interest in the subject planned for all. Reach secondary interests through primary interests, is the advice given by some educators. This procedure is scarcely less than a violation of pupils' rights; their real interests are used by the teacher to induce them to work upon what is of only secondary importance to them. Due consideration to individual differences would greatly relieve the school of the monotony of uniformity.

In his chapter on "Individuality," Kirkpatrick [1] has called attention to the importance of "commonality." He says, "To develop the common characteristics necessary to the maintenance of proper social relations, there must be some uniformity as to what is done and learned." The emphasis in the discussion given above to individual differences does not preclude sufficient attention to the acquisition of those characteristics and abilities that make social relations possible.

[1] Kirkpatrick, E. A., *Fundamentals of Child Study*, pages 302–319.

Recognition of the importance of individual differences. Studies in individual differences as well as in social complexities have led school men to recognize in some degree the importance of the variations of individuals. Accordingly, various plans have been put into effect to provide relief from uniformity and freedom for individual development.

PROVISIONS MADE FOR INDIVIDUAL DIFFERENCES

The elective system. A system in which students are free to choose the subjects which they wish to study would appear to be sufficient provision for individual differences. The elective system has been in use in colleges and universities for some years. However, some restrictions and some special subjects are usually required. In the latter part of the nineteenth century the high schools followed the example of the higher institutions and made provision for limited electives. To a very limited extent some schools allow credits on work done at home, such as milking cows, feeding pigs, making beds, and washing dishes. This is one form of electives. In recent years the junior high school, reaching downward two years into the elementary school, is making an attempt to provide certain elective work to accord with individual variations discovered among children of the ages of twelve to fourteen. But the elective system thus far developed is not all that its name may imply. Restrictions have greatly limited the variations intended. Indeed, the scope of interests for the students has been so limited that their choice has been one of subjects to be avoided rather than one of subjects to be elected. In many so-called junior high schools, as now organized, the elective system is little else than the privilege given to the stronger students to take in addition to the usual seventh- and eighth-grade work some Latin or algebra, which have been first-year subjects in the traditional high school. Even with such limitations,

the elective system can be extended downward into the grades only when the departmental system of instruction is put into use. The junior high school movement has had the effect of bringing the departmental work into the seventh and eighth grades. It is probable that the system will not go further downward for some years.

To a large extent the elective system in our public schools is far from providing adequately for individual differences. First, the subjects for choice are very limited. Then, having once chosen subjects by eliminating those not wanted, the pupil must work largely in unison with other pupils. There is little variation within the subject itself. Could all grade pupils choose from the score of subjects listed earlier in this chapter, there would still be little freedom within geography, or language, or spelling, or arithmetic. Opportunity for real variation must be provided in another way.

Special schools. In some cities or school districts provision is planned for those pupils who are regarded as misfits. The truant is indeed an individual variant. A truant school is arranged for such. Ostensibly the purpose is relief for the regular teacher and her school, not a means of providing for the different interests of the truant. But the truant school is often identified with the ungraded school. One of the stronger teachers — usually stronger in management and discipline — is placed in charge. The pupils intrusted to her are those who are misfits in age, size, intellect, or behavior in the regular school. But the school work done is little different from that in the regular school; the chief difference is essentially one of method. These schools are really hold-over schools. They make no provision for individual differences in interests and capacities. Reform schools are clearly of this class. Schools for the weak-minded vary somewhat in their work according to the mental caliber of the pupils. Here again there is less attention to

varying interests, in so far as they exist, than to a general training intended to bring the mental power of the individual up to normal that he may again undertake uniform work.

Industrial schools. In recognition that many pupils are more "thing thinkers" than "idea thinkers," industrial schools have been provided. Leavitt discusses such schools under the chapter headings, "Prevocational Work in Grades 6–8," and "The Intermediate or Separate Industrial School."[1] In the first class, only the upper grade or the greatly retarded pupils are admitted. In some schools only boys are admitted. In these schools the traditional school work usually occupies the forenoon — or half the time — and industrial or shop work the rest of the time. In the industrial work some individual variations are allowed so far as equipment and instruction can provide. The separate industrial school is planned for upper grade pupils who do not go on into high school courses. These schools are essentially elementary trade schools, and pupils are allowed to elect work according to the trade they expect to follow. Thus, these industrial schools are arranged for usual misfits in the traditional course. They are not planned to discover and develop individual differences among the great majority of grade pupils.

Differentiation in the uniform subjects. A further attempt to provide for individual differences in the grade schools has been made in permitting certain deviations within the subject or assigned lessons. Optional work is allowed. Special composition is accepted in lieu of assigned work; problems may be substituted for exercises in arithmetic; original map drawings may take the place of a study of the text in geography. Such variations are, however, very slight and are more in the nature of a compromise between the usual requirements by the teacher and the real interests of the

[1] Leavitt, F. M., *Examples of Industrial Education*, pages 95, 129.

pupils. Indeed, the variations cannot be at all extended when limited to the scope of work outlined in terms of the traditional and formal curriculum. Even the texts attempt provisions for such differences. There are "practical" arithmetics, "everyday" arithmetics, "business" arithmetics, "commercial" arithmetics, and just arithmetics. There are "practical" language lessons, "live" language lessons, and just language lessons. Further, the attention of the teacher to individual pupils during study periods is an earnest attempt to provide for individual differences. This effort is best known as the "Batavia System."[1] "Supervised study," so much emphasized in recent months, is a similar attempt to provide for the development of individual interests. Parker[2] presents three means, not discussed above, of attempting to adapt school work to individual differences: 1, Abolishing all class instruction and reverting to the individual method — the Pueblo plan; 2, self-conducted homogeneous groups — a modified form of the monitorial scheme; 3, recitations for only those students who need them, seat work for others.

These statements lead to a generalization as to the inadequacy of the usual methods of providing for individual differences. Not one of them is sufficiently far-reaching. Nor can they become so under the limitations of a curriculum which consists largely of principles rather than practices. The elective system under great restrictions in the lower schools is essentially a means of inducing students to tolerate the otherwise uniform requirements. The half-day industrial schools claim that such an increase in motive and attitude is engendered that the student accomplishes in the common branches in half time what he does in full time in the traditional school. Differentiation in subject matter

[1] Described in Bagley's *Classroom Management*, pages 214–223.
[2] Parker, S. C., *Methods of Teaching in High Schools*, page 379.

and in the texts is a modification of the elective system and has the same effect; it is a means of riveting attention the more securely upon the old uniformities. In short, within the elementary school at least, if not in the high school as well, the attempt to provide for individual differences has been wholly and lamentably inadequate. A very much more radical plan is necessary. Indeed, there appears to be a lack of appreciation of the situation. We are holding tenaciously to an antiquated curriculum of extreme uniformities in face of recognized individual differences. We are making only meager changes in methods of work and management while fully cognizant of great social changes and consequent individual variations. We are setting up uniform tests and demanding standardization at the same time that we are discovering through scientific research the great extent to which our pupils differ in the very work which we are testing and standardizing. As Dewey pointed out some years ago,[1] there is a real conflict between our newer aims and standards and the conditions of work to which we have been accustomed. In the next section an attempt is made to point out how provision for individual differences may be more effectively made.

SUGGESTED PROVISIONS FOR INDIVIDUAL DIFFERENCES

Life activities as subject matter. Principle Two, announced at the opening of Chapter Nine, makes a demand for a curriculum in terms of the real life and environment of people. In real life there are found individual variations according to circumstances. This is in strict accordance with the modern idea of adjustment. There is, to be sure, much uniformity; for example, gangs of men shovel gravel in unison on the railway, or factory hands operate as one

[1] Dewey, J., *The Educational Situation.*

many duplicate machines. But such uniformity bespeaks no development. In real life difference is more common than uniformity. The very nature of social and industrial life demands this.

If our school work consisted in the main of a study of this greatly varied life that is going on outside of the school, there would be every opportunity for the individual differences among the pupils that are experienced by people in real life. In real life the " commonalities " (to use Kirkpatrick's term again), so far as language, writing, arithmetic, and the like are referred to, are quite incidental to what we are doing. For example, we use language of common understanding in making a Wall Street transaction or in " swapping " jack-knives; we use arithmetical calculations, mutually understood, in these trades or in other quantitative experiences. There are other activities in life in which we are all more or less concerned, for example, transportation. This is one of the many topics that compose the curriculum proposed.[1] Because we are all dependent upon some means of transporting the things we use, we are concerned with it as a study. Thus all the pupils of a given grade in which this topic is a part of the curriculum study transportation. But the topic admits of unlimited variations for study. Unavailability of suitable materials for study may greatly limit the opportunity for individual differences; for example, pictures, actual observation of various means of transportation, models, descriptions, and other data. But the subject itself admits — quite naturally — of all those variations of treatment that are actually experienced in the real world. Some pupils will give their first attention to the steam engine, others to the turbine water wheel; some to the caterpillar tractor, others to the limousine and the pony cart; some to quantitative aspects of transportation, others to the purposes

[1] For outlines see Chapter Seventeen.

in changing the location of things. Thus, except for present lack of means of study (which would soon be supplied if demand were made), such a topic provides as wide a range of differences as life itself.

Not until the nature of the curriculum used in the schools provides opportunity for differentiation according to interests and abilities may we expect pupils to develop sufficiently to adjust themselves adequately to the complexities of life. Until a more fundamental change in the school curriculum is made, the efforts of our schools to provide for individual differences will be futile.

Method of schoolroom work. The traditional curriculum calls for a method of learning rather than one of study. This procedure has led to the almost universal recitation. The recitation is largely used as the time for pupils to re-cite what others of the group already know. It is essentially a period for testing. Such tests, as also most examinations, are not conducive to individual variations. As pointed out elsewhere, the recitation of this type is out of place in school work. Class work should be a beginning or a continuation of individual study. The curriculum proposed in this volume fosters *study for the purpose of doing* rather than learning for the purpose of reciting. The teacher and his class may open a new topic at some class meeting. None of the topics suggested in Chapter Seventeen are wholly new to the pupils. The pupils at once set themselves to thinking, or commenting, or asking questions. The period is one for "conference" rather than recitation. The topic is opened much as it would be in real life. Then begins a search for more information. This is found in the library, in excursions, in consultation with one another or with people outside of the school. At irregular times, not every day necessarily, the group come together to continue their conference. Each makes such contributions as he can. Each has been

studying, not an assigned task, but such phases of the topic as his individual interests have prompted him to. In this conference their findings are pooled. The members of the class profit more or less according to their apperceptive preparation or their individual interests. It may well be expected that some will participate much more at times than others and profit accordingly. At other times the participation may be reversed.

In Horn's study of participation in recitation, referred to earlier in this chapter, it seems clear that opportunity to participate is largely determined in the traditional school by the teacher. Horn's tables clearly show that the four teachers in the University Elementary School, following the methods of class work here advocated, provide opportunity for pupils to participate according to the pupils' differences, interests, and abilities. From Horn,[1] Table VIII is constructed to record the distribution of participations of pupils arranged in four quartiles on the basis of general ability.

TABLE VIII

DISTRIBUTION OF PARTICIPATION AMONG PUPILS IN CLASSROOM RECITATION

TEACHER	1	2	3	4
193	49.3	28.2	5.6	16.8
193	48.3	.9	30.1	20.7
191	36.6	29.1	19.4	14.8
192	27.3	5.5	30.9	36.3
192	37.1	24.5	16.5	21.8
194	39.5	14.6	25.6	20.2

This table shows that in the group with teacher No. 193 the fourth of the class ranking highest did 49.3 per cent of the participating, the second quartile 28.2 per cent, etc.

[1] Horn, E., *Participation among Pupils in Classroom Recitations,* pages 21, 22.

It is readily noticed that there is considerable irregularity. This is quite in contrast with records of other teachers shown in Horn's tables. This irregularity is probably due to the fact that in this school the pupils vary in their participations according to their interests and their abilities in the particular topics under consideration. Their participations are governed, not by the teacher's questions, as seems the case in the traditional schools, but by the pupils themselves. The participations in class are largely voluntary. Thus, quite in contrast to the traditional form of recitation, the " conference " of this school provides much more liberally for individual differences.

The individual standard for results. So long as uniform tests are used and pupils as well as schools are standardized, little progress may be expected in the furtherance of individual differences. Competition is said to be the life of trade, and comparison the spur to higher educational achievement. Differences in such cases are quantitative with respect to one common characteristic. But quantitative differences are not of chief importance here. The problem is rather one of differences in traits — in interests, in purposes. To the extent that minimum essentials are sought and required, in terms of traditional school subjects, to that extent individual differences are disregarded.

The purpose of the elementary school should be *to help boys and girls do better in all those wholesome activities in which they normally engage.* This means that each is to do better than he himself has previously done. Competition is with his former self. The standard for each pupil is the best he can possibly do. This means that in the study in which a pupil is engaged there is no specification as to the amount to be accomplished, in terms of pages, or problems, or tests, or averages, or minimum requirements. The only requirement is that each do all he can to the best of his ability.

What an individual accomplishes may indeed be compared with accomplishments of others, but care should be taken that the work of the average or that of any group be not made the standard for others. By this means individual variations are greatly encouraged, not directly but by indirectly setting wholly aside the notion of uniformity of work or the standard set by the average.

This plan is quite at variance with prevailing practice and present tendency. Opposition will probably be made on the ground that minimum requirements and uniform standards are essential to secure satisfactory work by school pupils — and teachers. Just such seems to be the case in the traditional school with the formal curriculum. It does not hold true in the everyday life of children and adults. Uniform standards serve the purpose assigned when the employment is not according to the interests and abilities of the participants. They serve as a goad, but are thus an ill reflection upon the appropriateness of the school work in which the pupils are engaged. The individual standard is adequate when the pupil's efforts are guided by his own interests. The best motives for good work are *found* in the opportunity for individual variations according to real needs.

VIEWPOINT ON INDIVIDUAL DIFFERENCES

Provision for the development of individual differences will be made in proportion to the importance attributed to it. The problem of individual differences is a comparatively recent discovery. Until its importance is fully appreciated, present provisions will be deemed adequate. The position is taken in this chapter that by reason of the highly differentiated phases of everyday life of children and adults, effective school work should provide for differentiation on the part of pupils to no less extent. This means a radical

departure from the present practice of uniform requirements so characteristic of our public schools. The traditional curriculum does not admit of such variations. The subject matter of the traditional curriculum constitutes the "commonality" among people in real life. Only when the curriculum is taken directly from real life and the Three R's become as incidental as in real life; when, in consequence of such a radical change, our schoolroom methods provide for real study rather than chorus recitation; when, in further consequence, minimum requirements and standards set by averages are ruled out — only then can adequate provision be made for the important individual differences [1] among pupils.

This provision for individual differences through a curriculum in terms of community life leads to a large problem in school management not discussed in this volume. School organization by definite grades and school management by a

[1] In this chapter no consideration has been given to the quantitative differences of individuals in selected common traits. The problem here is one of different traits, rather than amounts of difference in any common trait.

I am not unappreciative of Thorndike's insistence that "effective description of the facts of individual differences and of their causation must be quantitative. The questions are questions of amount, or at least become such when carried beyond a first survey" (*Educational Psychology*, Vol. III, page 144). In that case the practical school man should not go "beyond a first survey," though the psychologist may advisedly do so. In Horn's study, referred to in this chapter, pupils are compared quantitatively as to their participation in recitations. I think pupils of School XVI should be compared on a different basis. Tom's participation is at a maximum when the topic under discussion is the steam engine as an instrument of transportation. Mary takes no recognizable part, as her interest is practically negligible. In a study of the limousine for women and aged men, the positions of Tom and Mary are reversed. The immediate and practical question for the school supervisor or teacher is not, How much do Tom and Mary differ in ability to recite upon the topic "steam engine," when one is scored 837 and the other .738? — but rather, How should school work be arranged when it is evident that boys show a genuine interest in one topic and girls in another? It is this practical question that is discussed in this chapter. For this reason references to strictly quantitative studies of individual differences are not included in the readings given.

definite schedule, whatever be the nature of the subject matter studied, preclude such full provision for normal opportunity for school occupation as is found in home and community life. The school must become a miniature community. Pupils must have liberty to work and play as may be determined by circumstances, not by the dictates of teacher or by regulation of school schedule or organization. The schedule suggested on page 269 and the outlines of work by grades given in Chapter Seventeen are a compromise. These must yield to a schedule that enables individuals and varying groups to work and play as citizens work and play in home and community. The well-regulated home and the well-ordered community are examples for schools in which adequate provision is made for the individual differences of its pupils.

Supplementary Readings

BAGLEY, W. C. *Classroom Management*, pages 214–223.

DEWEY, J. "Individuality," in Monroe's *Cyclopedia of Education*.

JUDD, C. H. "Individual Differences," in Monroe's *Cyclopedia of Education*.

—— *Genetic Psychology for Teachers*, pages 98–160.

KIRKPATRICK, E. A. *The Individual in the Making*, pages 279–307.

—— *Fundamentals of Child Study*, pages 302–319.

MCMANIS, J. T. "Individual Differences in the Early Grades." *School and Society*, Vol. 3, pages 289–295.

MCMURRY, F. M. *Uniform Curriculum and Examinations*, National Education Association, 1913, pages 130–148.

—— *How to Study and Teaching How to Study*, pages 246–280.

—— *Elementary School Standards*, see Index.

MUNROE, J. P. *New Demands in Education*, pages 3–41.

NEARING, S. *Social Adjustment*, pages 28–69.

PARKER, S. C. *Methods of Teaching in High Schools*, pages 362–390.

PUFFER, J. A. *Vocational Guidance*, pages 128–144.

SEARCH, P. W. *An Ideal School*, pages 158–176.

SIDERS, W. R. *In Class Instruction, How Can the Individual be Reached?* National Education Association, 1909, pages 175–182.

SNEDDEN, D. *Educational Readjustment*, pages 130–153.

STRAYER, G. D., and NORSWORTHY, NAOMI. *How to Teach*, pages 151–170.

THORNDIKE, E. L. *Individuality*, pages 1–52.
—— *The Principles of Teaching*, pages 68–104.
WILLISTON, A. L. *Types of Schools for Different Pupils.* National Education Association, 1913, pages 567–571.
YOUNG, J. W. A. *The Teaching of Mathematics*, pages 81–86.

General References

DEWEY, J. *Democracy and Education*, pages 340–357.
DRAPER, A. S. *American Education*, pages 119–136, 275–290.
HORN, E. *Distribution of Opportunity for Participation Among the Various Pupils in Classroom Recitations.*
INGLIS, A. "Reorganization of the High School." *School Review*, Vol. 23, pages 307–318 (adolescent differences).
KIRKPATRICK, E. A. *The Individual in the Making.*
Report on Minimum Essentials, Fourteenth Year Book of the National Society for the Study of Education.
SNEDDEN, D. In Monroe's *Principles of Secondary Education*, pages 214–231.
THORNDIKE, E. L. *Educational Psychology*, Vol. III, pages 142–388.
WEEKS, RUTH. *The People's School*, pages 38–108, 149–189.

Statement Outline for Chapter Eleven

School organization is of two types:
- One type is for the purpose of contributing to more effective teaching;
- The other type is pure form — an end in itself.

Organization of the formal type is prominent in the traditional school.
- Pupils are closely graded and the contents of texts are logically arranged.
- This organization is due to an adult's point of view.
- Two evil effects are in evidence:
  - Pupils cannot readily adjust themselves to such definite schemes.
  - Effort is made merely to "cover the ground."

Changes in organization are in evidence.
- In the elementary school economy of time suggests simplification of organization.
- In the junior high school a reform of the curriculum seems assured.

Organization should yield to continual change.
- "The case is of child." (Dewey.)
- Organization at the University Elementary School is reduced to a minimum.
- A minimum organization is effective in instruction.
  - A program of easily interchangeable topics is most natural.
  - "Prerequisites" are not needed in the elementary school.
  - "Minimum essentials" are not imperative.
  - Correlation is made simple and effective.
  - The problem of relative values is simplified.
  - Thoroughness is governed by purpose.
- A minimum organization is effective in school management, governing attendance, routine, fatigue, promotion.

School studies need organization in terms of community life, not in terms of the Three R's.
- Final integration of studies is claimed as an essential aim.
- Initial integration is preferable.
- Organization in terms of life makes the problem of integration needless.

CHAPTER ELEVEN

The Curriculum and Organization

PRINCIPLE FOUR

The curriculum should be so organized that it will admit of easy rearrangement of the schedule for any day, of the work for any grade, and even of the transfer of work from grade to grade.

TWO VIEWS OF ORGANIZATION

Organization for a purpose. Most teachers are well aware of the prominent part in school work taken by reviews and summaries. At the close of a given period of time, the usual classroom work is interrupted; a review is taken and summaries are made of the subject matter covered. These summaries are condensations in organized form. In most schools the purpose is probably to help the pupils prepare for examinations. Teachers may also have a conviction that such organization has a much larger purpose, i.e., that of helping a pupil retain information in a form contributing to greater usefulness long after school examinations. Indeed, such organization of subject matter may be regarded as the only effective manner of studying logically. As another type of organization for a purpose one may note arrangements in various schools for fire drills. A system of egress is so arranged that a school of one thousand pupils can be emptied in a minute or less. The Lancasterian scheme of class management provided for the instruction of a large number of pupils by one teacher through a system of monitors.[1] The purpose was economy of time. "A place for everything and everything in its place" expresses in Lan-

[1] For good pictorial illustrations see S. C. Parker's *History of Modern Elementary Education*, page 105.

caster's own words his emphasis on organization. These few citations are sufficient to illustrate how purposes may determine the form of organization. It is easily understood how any such arrangement of means and materials may be readily changed according to changes of purposes to be accomplished.

Organization as an end. On the other hand, organization tends to become empty and formal. A large number of reviews and summaries in elementary school work are of this character. A teacher easily falls into the habit of giving reviews and making summaries without seriously having in mind a specific purpose for such. It is easy in the traditional school to allow routine to become so mechanized that practices become purposeless, other than to serve as "busy work." In school management "lines" may have been instituted to accomplish vital purposes. In some places purposes may still call for such organization in passing into the building and out, but there is good evidence that the practice continues, though conditions do not call for such management.

It is important that these two aspects be kept in mind during this discussion of school organization. Organization effected for a specific purpose is to be desired, but there is great danger that subject matter and school management be organized where purpose is not definite. Principle Four is clearly contradictory to prevailing practice in the administration of public schools. Definiteness in organization is a marked feature in most schools. Most school administrators take much pride in organizing courses of study and management of schools with such definiteness that all teachers can readily follow instructions. The position taken in this chapter is not against organization, but rather that an undue amount of attention has been given to organization to the neglect of the very purpose to be accomplished. The reader

is here reminded of the point of view of the child presented in Chapter One. Organization can be appreciated and used only by those of experience. Children are not ready for the systematic treatment of subject matter and for definiteness in management so much emphasized.

ORGANIZATION IN THE TRADITIONAL SCHOOL

Prominent forms of organization. There is no American system of schools, but there is much system in American schools. Most elementary schools are organized upon the basis of eight grades; some have nine grades, some only seven. Where the junior high school has been organized, the elementary school is reduced to six grades. In school districts enrolling a considerable number of pupils these grades are usually divided into two sections, the more advanced and the less advanced, usually one half year apart. Some schools use adaptations of the well-known Cambridge system. This system is of the moving-sidewalk type; that is, different groups progress at different rates. Thus some schools, through a more highly organized plan, provide what is essentially a combination of six-, seven-, eight-, nine-, and ten-grade schools in one. Most rural schools have been ungraded until recently. Under county supervision — or, possibly, more appropriately called county organization — practically all rural schools are now graded. This organization is primarily upon the basis of units of subject matter. Thus a grade refers to a subdivision of work outlined rather than to a year of schooling. Courses of study, as used in most schools, consist of divisions and subdivisions of the common branches arranged so that within the seven, eight, or nine years of the elementary school the conventional subject matter can be completed. This organization is evidently upon the assumption that the pupils have a definite amount of work to be accomplished; that they have a given

time in which to do this; and thus organization of subject matter on the basis of time units is a means to an end.

The organization of the contents of school texts is another form of organization prominent in the work of the traditional school. In arithmetic, for example, are found chapters in orderly arrangement: notation and numeration, addition, subtraction, multiplication, division, common fractions, decimal fractions, etc. In geography location is the basis of organization. The descriptions of both larger and smaller sections are on similar plans: physical features, plant and animal life, the life of the people.

Organization due to adult point of view. This logical arrangement of pupils, courses of study, and texts is probably due to the way the adult views school management, school work, and school books. He sees the various phases of the school organized. By reason of his experience and his appreciation of completeness, the adult is inclined to wish certain amounts of work to be covered by the pupil. A course of study has a beginning and an end; a text in arithmetic is deficient if it lacks in treatment of certain conventional topics. Moreover, the administration of a school appears to have more control if organization is complete, positive, definite. Custom, too, has played a large rôle. Experience tends to crystallize into form. A conventionalized organization has developed and not many teachers and administrators are willing to break from such custom.

Evil effects. Close organization in school management and school work must bear such responsibility for the great retardation evident in our schools. Organization endangers those who are unable to adjust themselves readily to that particular scheme. The boy who is weak in geography, however strong he is in other school subjects, or in subjects not given a place in school, is retarded by the organization of the course of study and the methods of procedure

through the grades. Organization does not harm those who can readily adjust themselves to the organization. A second evil is the development of the habit of "covering the ground." Pupils too generally get the notion that the subject has been finished when they have "gone through" the text. Arithmetic, organized as in the conventional chapters, does not prepare the boy for arithmetical calculation in real life because business is not organized after the plan of the school text. A boy remembers arithmetic much as it is organized. In actual experience he finds quantitative problems, but not in the form or order which he recalls in the text. This often occasions great trouble. Application is made extremely difficult. There is real danger that the pupil's purpose has been to complete the subject rather than to use the parts of the subject in solving his own problems in real life.

CURRENT CHANGES IN ORGANIZATION

In the elementary school. For some years there has been a tendency to shorten the elementary course from nine or eight to seven or six years. The ostensible purpose is economy of time. The traditional course of study is assumed to be of a rather definite amount. Better trained teachers, improved methods, and more efficient equipment — not to include the more capable pupil — suggest the possibility of accomplishing the course of study in one or two years' shorter time. This means a reorganization of the work into one or two less divisions (years). The common branches are undergoing some such changes. There are also tendencies, in some places, to introduce departmental teaching. This will increase the emphasis on the subjects studied, which means more attention to organization.

To shorten the course because pupils *can* cover the ground in less time is to assume that completing the course is the

purpose rather than giving the pupil all possible development in the years of his maturing. There is serious danger here that organization take precedence of pupils.

In the junior high school. The junior high school movement cannot be divorced from the changes taking place in the elementary school. This junior high school movement seems to grow out of two situations: 1. The large withdrawal of pupils from the public school course. Three fourths of the elementary school population do not go so far as to enter high school. The junior high school, beginning at the present seventh grade, would enroll at least all those who normally attend the seventh and eighth grades. It is expected, further, that the new plan, enrolling pupils in a new system, would tend to retain pupils longer than in case of no change. 2. The recognition of a great waste in our system. This is located in the seventh and eighth grades in the belief that in these two grades there is a great deal of repetition of work covered in grades lower down. The junior high school is arranged, theoretically, on the assumption that the traditional work of the eight grades can be accomplished in six years and that the pupil may save time by beginning at the seventh grade on the usual high school subjects — or a slight modification of those subjects. The junior high school movement is the solution proposed by those who view public school work largely as an administrative problem.

One is unable to find in most so-called junior high schools any considerable modification of the curriculum of the seventh and eighth grades and the first year of high school. In most of these schools the chief change in the curriculum is the admission of a foreign language as an elective in the first year of this school, corresponding to the seventh grade. The more striking change is simply the departmental system of classes and administration similar to that in high schools.

Thus grade pupils are treated as high school students. This plan of organization does, indeed, appeal at the outset to a goodly number of boys and girls — boys and girls who are pleased with the doubtful compliment of being rated as now somewhat matured. More independence is allowed; discipline is less confining. There is a touch of seeming advancement in this, and a sufficient number of pupils are thus retained to increase the enrollment.

The junior high school is advocated as a means of securing economy of time in elementary and secondary education. In so far as the curriculum of the last two years of the grades and the first year of the high school remains essentially unchanged, economy is scarcely effected. In theory, however, repetition in the seventh and eighth grades of work done in the lower grades is exchanged for opportunity to advance at once into what is nominally high school work. Here is the *device* intended by those who would shorten the elementary school to advance the student two years earlier into what is known as professional work.

The advocates of the junior high school are proposing a reorganization of secondary education affecting elementary education. Until the content of our curriculum throughout our public school system is considerably changed, there seems to be insufficient reason for the emphasis on reorganization. A reform in the nature of our curriculum seems imperative. Any needed reorganization of the school will be a very much simpler matter when that reform is adequately made.

ORGANIZATION CONTINUALLY CHANGED

"The case is of child." Dewey closes his discussion of *The Child and the Curriculum* with the conclusion, "The case is of child." This point of view is emphasized throughout this volume, and is especially applicable in the problem

of organization. There is serious danger that the adult neglect the point of view of the child. School management, courses of study, and texts are all without real reference to the child. Does the case of the child warrant a change of emphasis on school organization?

Organization at the University Elementary School. In Chapters Thirteen to Sixteen four school studies are presented. These four studies include all the school work done. Representative outlines, exhibited in Chapter Seventeen, indicate that a great quantity of work is included but is not organized: it is even not logically arranged. These topics are shifted from grade to grade. No grade has a claim upon any topic. The clock may be studied in Grade I one year, in Grade II another year. The means of transportation may be studied in any grade after Grade III. Indeed, an allied topic, "How we go about," is studied in Grade I or Grade II. Thus the topics studied may be readily shifted about from grade to grade, and the order changed within the grade. It is not possible to study spring flowers in October, nor is it advantageous to study farming in midwinter. Except as the season may affect the study of a topic, there is neither sequence nor schedule for the various topics studied.

Further, no time schedule is set for the various topics. The amount of time devoted to a given topic depends upon a variety of conditions: information possessed by the teacher, source material available, interest of the class as well as that of the teacher, time needed for other work, etc. The first grade some year may spend one day (i.e., about one hour and a half) studying the squirrel; the next year the first grade may spend a week or more, using an hour and a half each day. One year a sixth grade may spend as high as eight weeks (with two and a half hours each day) on the topic of manufacturing; the next year the sixth grade may take only half that time on the same topic. This, of course,

means that in some years much more work is done on a given topic than in other years. If less attention is given to one topic, more attention is probably given to another.

Closely connected with this is a third phase of organization of the work. There is no specified amount of work to be accomplished in a given time. No minimum requirement is made for any grade, nor does graduation from the school of seven grades indicate the completion of a specified course of study. Promotion from grade to grade is essentially upon the basis of one year's experience in the school. Graduation is largely upon the basis of seven years of normal activities in the school. There are, to be sure, exceptions. These individual cases are decided upon by the various teachers concerned, perhaps even admitting the pupil in question to the conference. No tests nor examinations of a formal type are given. The daily work is the basis for judgment.

Educational considerations affected by such a program. 1. A program of easily interchangeable topics is most natural. Teachers are in the habit of following the chapters in arithmetic in order — and this order is almost universal. Geography study proceeds from the New England states to other groups of states westward. History is followed in its chronological order. From the point of view of pupils there is no inherent reason for studying decimal fractions before percentage, which is a special case of decimals, nor are pupils naturally interested in following many events in sequence of time. In studying topics taken directly from social and industrial life, this absence of organization makes the study of a topic according to circumstances the much more natural course. Therefore it may be studied in one grade or another, sometimes early in the school year, sometimes late.

2. The foregoing statement implies that prerequisites are not needed in these elementary studies. One subject must be preceded by another only in case the subject matter

is so technical that certain information or training is supplied in the prerequisite. In real life one who studies the banking business is not required to study the grocery business previously. In real life we study a situation so far as our ability at that time enables us, then we stop for a time. Such would be the case in school did the studies consist of the experiences of people in real life. But even the formal subject matter of the traditional school need not be organized in a particular order.

3. Minimum essentials are not imperative. Just now much effort is being directed to ascertain these minimum essentials in the various traditional school subjects. If we assume that the common branches are essential school subjects and if we do discover the one thousand words most used in correspondence we have still no basis for concluding that the spelling of two new words shall be taught each day or that these thousand words must be mastered before the close of school. A discovery of what is actually used by adults does not yet determine what must be taught to children in school. We must discover, also, whether the mastery of the spelling of these thousand words in school is retained until the words are used in adult life, or whether we really learn to spell them in the course of reading and writing later in life, when such spelling functions in real situations. Only in comparatively few establishments do employers require of the candidate for employment a certain proficiency in spelling, in arithmetical ability, in geographical knowledge. In real life these minimum essentials are incidentals. As our schools take on more and more the study of real life rather than the conventional Three R's, the possibility of mapping out minimum essentials will diminish.

4. Correlation would be greatly changed by a much more flexible organization. The conventional correlation of geog-

raphy and language, of language and nature study, of agriculture and arithmetic, is arbitrary. This correlation goes so far that the two subjects are taught together when such union is possible, rather than when it is needed. The best way to correlate is not to consciously correlate such subjects. Study effectively the grocery store, for example, and such work in arithmetic, language, and geography as is needed will be called into play. Determine in advance that in this study certain aspects of numbers, of language forms, and of geographical work must be correlated, and correlation becomes studied, stilted, artificial, ineffective. The best correlation accompanies effective study of a real problem; the studies correlated are determined by their contribution to the main issue. In the representative outlines given in Chapter Seventeen, it is readily seen how materials of geographical, arithmetical, and language nature correlate by contributing to the study of the grocery store or transportation.

5. A flexible organization simplifies the problem of relative values. Much attention has been given to the equitable distribution of time among the various subjects on the daily program. The percentage of time allowed for arithmetic, geography, spelling, etc., is the result of custom in schools rather than because those subjects serve children or even adults according to that division of time. In most elementary schools these daily schedules are followed rather closely. In contrast to this rigid schedule, the amount of arithmetical work should be determined by the need of such in the solution of real problems. If a grade of pupils is studying banking, much more time and attention would be devoted to arithmetical calculation than when studying the United States postal service, or manners and customs of peoples. There is serious danger in allowing the relative values of traditional subjects to become fixed. These

values should fluctuate according to the service they render the larger problem being studied.

6. Thoroughness is another issue greatly simplified by the flexible organization advocated. Thoroughness in school work is too generally regarded as the mastery of certain rather fixed subject matter. In real life thoroughness is regulated by purposes to be accomplished. Thoroughness must, therefore, vary according to circumstances. In studying banking, sixth-grade pupils must master certain arithmetical processes in so far as they serve in this study. But the content in this study of banking must vary according to the advancement of pupils studying it. Fourth-grade pupils will make a less extensive study of this business than sixth-grade pupils. High school students would carry the study much further. Thoroughness must be a new problem with every change of subject and class of pupils.

School management as affected by this flexible organization. 1. Attendance is much emphasized in most schools. Close organization of courses of study and school management may require this. An organization admitting frequent shifts places emphasis upon work accomplished, industrious attitude developed, or power of application, rather than upon regularity in attendance. Attendance becomes a less serious problem when the school is less organized (not disorganized) in accordance with the nature of children. On the other hand, attendance becomes better when school work and management appeal to children than when regular attendance is emphasized as a virtue in place of a means to an end.

2. Mechanical routine should yield to thoughtful direction. True, some habits are solvents of much waste. It is to be greatly feared, however, that " mechanizing routine " contributes more to keeping school than teaching school. Routine emphasizes the mechanics of school. Things of

first concern are liable to receive only secondary consideration. One of the greatest weaknesses in the pupil-product of the traditional school is that the individual exhibits more blind obedience than thoughtful self-direction. He has been trained under the influence of exact organization that develops compliance rather than under the influence of flexible organization that demands continual judgment. The amount of arithmetical calculation used in the study of the grocery store, the post office, methods of manufacturing, etc., must be judged anew each time the topic is studied. Thoughtful direction under a flexible organization is more in accordance with real life and is more developmental than mechanical routine under a rigid organization.

3. Fatigue among pupils has become quite a problem for students of school conditions. Children run all day in play; they soon become " tired " when directed to attend to tasks. In school, pupils — and teachers too — become fatigued *probably* by reason of effort in complying with organization and routine rather than because of effort expended in industrious application. Studies of fatigue among school children have been made upon the basis of their work upon the traditional school subjects. The investigator is likely to reach quite other conclusions when school conditions make possible some studies of effort expended in which the pupil is more individual in his work and in which his time and energy are governed by varying needs rather than by previously organized work and schedule.

4. A very different basis for promotion is suggested. Promotion in the traditional school is primarily upon the basis of accomplishment of minimum essentials, or probable ability to do the work of the next grade as judged by the quality of work already done.

Schools that succeed best in promotions of that nature are closely organized. Do away with this close organization,

set aside minimum essentials as really not essential, look upon the world of experience as offering very much more subject matter for study than pupils can accomplish, and recognize that individuals differ greatly in their needs — then promotion must be governed by the probable profit to the individual. Increase in experience is, in almost all cases, more profitable than repetition of work. Only in very exceptional cases should pupils not be promoted. Promotion should be upon the basis of a year of normal life. If we accept the principle presented in the preceding section that prerequisites are not needed in the elementary school, a pupil may advisably be promoted from Grade V to Grade VI without having accomplished work outlined for the fifth grade. This policy is in strict accordance with the principle discussed in Chapter Eight: the best preparation for later efficiency is efficiency in the immediate present.

This policy for promotion may appear weak. Viewed from the standpoint of the pupil rather than organization by the adult, the policy is more plausible. More sympathetic consideration by teachers and more thoughtful supervision by principal and superintendent are called for. Deplorable retardation will be largely prevented. Only those who have not confidence in the disposition of children to do well under favorable conditions would believe that such a policy of promotion would lead pupils to be indifferent and negligent in their work. Make school conditions favorable to healthy, normal activity of children and only in very exceptional cases will pupils take advantage of this policy of promotion.

INTEGRATION OF STUDIES

Final integration. "The final integration of studies and experiences of the pupil is an essential aim of the course of study. It may be necessary for the pupil to acquire habits

piecemeal, to develop skill bit by bit, and to gain knowledge by the general process of division of labor; but education is incomplete until these are integrated with themselves and with life."[1] Piecemeal knowledge refers to the common branches of study and their subdivisions. The prevailing view is that integration is secured by "applications" of geography, arithmetic, language, etc., to real life.

Initial integration. Throughout this volume a different point of view is presented. Final integration means no integration by the masses of young people who do not attend school long enough to get that unification of studies in life itself. Such children once out of school experience life without reference to the school studies taken earlier. These school studies, in the form of the Three R's, are only instruments in the conduct of life. Initial integration, in the form of life activities as topics for study, is natural rather than arbitrary. From the very beginning pupils should be led to center attention upon that in which the various subjects unite; they should recognize and appreciate how knowledge of numbers, language forms, and places enables them to study better the various phases of life, as represented in games they play, in nature they enjoy, or in industrial activities which interest them.

It may seem advisable, for a time, to provide that this initial integration lead to final disintegration. That is, it may be well at the close of the elementary school course, or perhaps at the close of certain grades, to disintegrate the studies of industrial activities and classify them in terms of arithmetic, geography, language, etc. This procedure would be a compromise with traditional practice. There are, however, two serious objections to this. Pupils closing their elementary school work with such a classification

[1] Dutton, S. T., and Snedden, D., *Administration of Public Education in the United States*, page 330.

would go out into life which is not experienced or viewed in terms of school subjects. To be equipped with such formal classification of real life is therefore not essential. A second objection is that with this final disintegration of school work into forms of traditional school studies as the culmination of school work, the study of life activities would be conducted merely as a means of acquiring information to be classified into the traditional common branches.

Organization in terms of life. Were school work organized strictly in terms of life acts instead of school arts, there would need be no problem of final or initial integration. To pigeonhole life activities in terms of reading, writing, arithmetic, etc., in the school and then to *translate* them back again in the form of " applications " in real life, are wholly due to the artificiality of our elementary education. It is entirely possible to look upon a given community as individuals pigeonholed into groups, as bankers, farmers, teachers, preachers, miners, tonsorial artists, etc. A more sane and social view would look upon the community as composed of citizens banking, farming, teaching, preaching, mining, barbering; but first and last citizens. In school it is possible to study the " arithmetic " of banking, the " geography " of farming, the " spelling " of teachers, etc. A more sane and social view would provide for a study of people in farming, banking, mining, etc. School work is too differentiated from real life and too disconnected within itself.

Supplementary Readings

Bagley, W. C. *Educational Values*, pages 107–127.

Butler, N. M. *The Meaning of Education*, pages 37–66.

Davis, C. O. "Principles and Plans for Reorganizing Secondary Education," in Johnston's *High School Education*, pages 67–105.

Dewey, J. *Democracy and Education*, pages 271–292.

Dutton, S. T., and Snedden, D. *Administration of Public Education in the United States*, pages 314–355.

ENGLIS, A. "Reorganization of the High Schools." *School Review*, Vol. 23, pages 307–318, 1915.
HANUS, P. H. *Educational Aims and Educational Values*, pages 1–21.
HECK, W. H. *Mental Discipline*, pages 110–129.
MCMURRY, F. M. *How to Study*, pages 85–134.
SNEDDEN, D. *Educational Readjustment*, pages 130–153.

General References

BACHMAN, F. P. *Problems in Elementary School Administration*.
BAGLEY, W. C. *Classroom Management*.
BOURNE, R. S. *The Gary Schools*.
CUBBERLEY, E. P. *School Organization and Administration*.
DEWEY, J. *The Child and the Curriculum*.
Report: *Economy of Time*. Bureau of Education, Bulletin No. 38, 1913.
Report: *Reorganization of Secondary Education*. Bureau of Education, Bulletin No. 41, 1913.
STRAYER, G. D., and BACHMAN, F. P. *Organization and Aministration*.

Statement Outline for Chapter Twelve

Work and leisure in real life supply a problem new to the schools.
- Work and leisure are two phases of civilized life.
- The occupation of workingmen in leisure time is a social problem.
- Young people must learn to distinguish wholesome leisure from destructive idleness.
- Thus, instruction in leisure becomes a school problem.

The traditional school stresses work and neglects leisure.
- Schoolroom occupation is scheduled as work.
- Recess is relaxation, not leisure.
- Ignorance of wholesome leisure is the leading evil effect of such a program.

Schools should have a work and leisure schedule.
- Pupils must learn to work and to enjoy leisure by participating in both work and leisure.
- Work and leisure must be provided in schoolroom studies.
- The time schedule must be very flexible.

The work-leisure schedule secures favorable effects.
- The schoolroom attitude of pupils in industry and discipline is much improved.
- A large contribution is made to home life.
- Juvenile offenses in the community are lessened.
- Culture and refinement are offered to the masses.

CHAPTER TWELVE

The Curriculum and Work and Leisure

PRINCIPLE FIVE

The curriculum should lead the pupil to appreciate both work and leisure and to develop a habit of engaging in both.

WORK AND LEISURE IN REAL LIFE

Two phases of life. "All work and no play makes Jack a dull boy." This implies that the boy — and the girl, too — must be provided with work and play if life is to be successful. "A day for toil, an hour for sport" (Emerson) has a similar implication and also indicates a distribution of time which must doubtless greatly vary according to circumstances. "The law of nature is that a certain quantity of work is necessary to produce a certain quantity of good. If you want knowledge you must toil for it; if food, you must toil for it; and if pleasure, you must toil for it" (Ruskin). Thus toil is essential for securing every good we wish, even leisure. Many would infer that leisure, if desired, might be secured through toil; it need not be regarded essential. In a later chapter on play the position is taken that play is as essential as work in the lives of little people. Similarly, it is here claimed that human life consists of two phases, work and leisure. Neither may be regarded as a mere means for the attainment of the other. "In itself and in its consequences the life of leisure is beautiful and ennobling in all civilized men's eyes."[1] The ennobling effects of wholesome work speak for themselves.

It is not important that effort be made to define leisure exactly. It is reasonably well understood. However,

[1] Veblen, T., *The Theory of the Leisure Class*, page 38.

caution must be taken that leisure be not identified with idleness. Idleness is base;[1] leisure is honorable. Nor is leisure as here used synonymous with recreation. The real purpose of recreation is to regain energy needed to carry on one's work. The same may be said of rest and relaxation. Overwork, resulting in fatigue, makes a demand for rest, relaxation, or recreation. Fatigue is not a prerequisite for leisure. The leisure class is sometimes contrasted with the laboring class. If distinctions are not too closely drawn, real leisure is found among the laboring classes. But such leisure must not be regarded as the reward of labor. The laboring man, as every other man, merits leisure even before his work is begun. Leisure is simply one phase of civilized life; work is another phase. The man who has no time for leisure is as truly out of tune with modern life as he who does no work but spends his time in idleness.

It is interesting to note how extensively leisure is now recognized as one phase of life. The home allows its children much more freedom from work than earlier — and parents take more of this same freedom. Social settlements in most of our large cities show by their work their recognition of the leisure hours of life as more than mere periods for recreation after toil. The Social Center Guild of America was organized by the People's Institute of New York "for the redemption of leisure." The church and affiliated organizations have joined with others in this movement. In referring to the work of the Young Men's Christian Association, a writer says, "No longer is the gymnasium an index to the prayer-meeting. It has values of its own. . . . The social parlors were good for ends of their own and not merely as a place for hearing the distant sound of hymns."[2]

[1] Idleness is classed as a physiological cause for truancy and delinquency. See Travis, T., *The Young Malefactor*, page 142.

[2] Wilson, W. H., *Evolution of the Country Community*, page 195.

Workingmen in spare time. Workingmen have always had some spare time, but in recent years the amount of spare time has increased as hours of the labor day have decreased.[1] There is little chance that workingmen while at work will become malefactors in society, but there is considerable danger of this in periods of idleness. It is usually the idler that makes trouble. The character of a man may be quite safely judged by what he does when free from employment. Here a social problem arises. Society is under obligation, not merely to judge a man as to his behavior in leisure time, but so to help him spend that time that judgment of him be more and more favorable. That is, society is under obligation to contribute as it can to helping men spend their spare time in a wholesome way. This social problem becomes virtually one of helping to substitute wholesome leisure for destructive idleness.

The study referred to in the footnote shows that about sixty per cent of all these workingmen patronize the movies. Those who receive the lowest wages go oftenest and patronize the nickel shows rather than those of higher class. Thirty per cent of the men patronize the saloon. It is encouraging to note in this study that reading newspapers occupies a larger percentage of spare time than does any other single feature. But it is also readily discovered that those who have shorter hours of labor spend a larger percentage of time in reading newspapers, magazines, and books. Those whose working hours are greater are probably the lower class of workingmen. "The men who work

[1] In a study of how one thousand workingmen spend their spare time summarized in the *Outlook* for April 4, 1914, the writer claims that he proves as "untrue the oft repeated statement that shorter working hours afford more leisure time for men to dissipate and make themselves less fit for work. Long hours causing over-fatigue seem to so lower the vitality of the working man that at the end of the day's work he naturally gravitates toward the saloon."

a less number of hours per day use their spare time more wisely and more uniformly than do men in the longer hour groups."

Youth and the city streets. In her studies of youth in the city, Jane Addams has pointed out that boys and girls must have their amusements. The misfortune of the situation is that most of these young people find their enjoyment in that which is unwholesome. Commercial interests take advantage of the spare time of these young people, who have not been instructed in the wholesome use of leisure.

In their studies of the gang, Puffer and Forbush [1] have shown how boys use their spare time. Too much of it is spent in unwholesome activities. These boys have not been taught the difference between wholesome leisure and destructive idleness. Their tastes and habits, unguided, have developed in the wrong direction.

Leisure as a school problem. The amount of vice and crime which is committed when people are free from employment clearly indicates that people have not learned to use well their spare time. If it is a problem for society to eliminate evil — or at least lessen it — it surely becomes a school problem to instruct youth in the use of time when they are not employed. If the school assumes its responsibility for instructing young people in the practical affairs of life, it should also recognize that leisure is one phase of life and that children should be taught ways and means of using that leisure well. In many parts of the country, the public has done much toward encouraging wholesome leisure. Public parks and playgrounds invite young people and their elders to convert idle spare time into wholesome leisure. Public museums and libraries offer strong induce-

[1] Puffer, J. A., *The Boy and His Gang;* Forbush, W. B., *The Boy Problem.*

ments to those who have the taste and the capacity to profit by such provisions. Here is the opportunity for the school. Instruction in the manner of spending leisure may seem a pure fad, a mere decorative function of the school; but when viewed as a social problem, a means of helping young people to adjust themselves to real life, the case becomes highly important.

WORK IN THE TRADITIONAL SCHOOL

Schoolroom occupation as work. Most teachers in public schools use daily programs for guidance. There is considerable variation in these in different schools. A collection of such programs provides data for an interesting study. It would be practically impossible to tabulate a large number of these so as to show attention given to work and to leisure. Two have been selected from many that have been collected and are here presented as typical.

SCHEDULE FOR GRADE IV, UNIVERSITY ELEMENTARY SCHOOL, UNIVERSITY OF IOWA, 1918–1919

Time	Monday	Tuesday	Wednesday	Thursday	Friday
9.00–9.30	Arith.	Arith.	Arith.	Arith.	Art
9.30–10.00	Reading	Reading	Reading	Reading	Art
10.00–10.15	Writing	Writing	Use of Ref.	Writing	Use of Ref.
10.15–10.45	Hygiene	Phys. Ed.	Hygiene	Phys. Ed.	Hygiene
10.45–11.00	*Recess*	*Recess*	*Recess*	*Recess*	*Recess*
11.00–11.30	History	History	History	History	Reading
11.30–11.50	Lang.	Lang.	Lang.	Lang.	Lang.
1.20–1.40	Music	Music	Geog.	Music	Geog.
1.40–2.00	Geog.	Geog.	Spell.	Geog.	Spell.
2.00–2.20	Ref.	Spell.	Arith.	Spell.	Science
2.20–2.40	Spell.	Reading	Science	Science	Arith.
2.40–3.05	Lit.	Lit.	Lit.	Lit.	Lit.

SCHEDULE OF RECITATION AND WORK, WOODSBORO, MARYLAND, 1912 AND 1913

GRADE	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
7th	Geography	Agriculture	Geography	Agriculture	Geography, Map D. 1
	Mental	Arithmetic	Mental	Arithmetic	Mental
	Recess	*Recess*	*Recess*	*Recess*	*Recess*
	U. S. Hist.	Md. Hist.	U. S. Hist.	Md. Hist.	U. S. Hist., El. 1 and 3
	Noon	*Noon*	*Noon*	*Noon*	*Noon*
	Grammar	Grammar	Grammar	Grammar	Grammar, Comp. 4
	Physiology	Civics	Physiology	Civics	
	Recess	*Recess*	*Recess*	*Recess*	*Recess*
	Spelling	Spelling	Spelling	Spelling	Spelling
6th	Geography	Agriculture	Geography	Agriculture	Geog. Map D. 1
	Mental	Arithmetic	Mental	Arithmetic	Mental
	Recess	*Recess*	*Recess*	*Recess*	*Recess*
	U. S. Hist.	Md. Hist.	U. S. Hist.	Md. Hist.	U. S. Hist., El. 1 and 3
	Noon	*Noon*	*Noon*	*Noon*	*Noon*
	Grammar	Grammar	Grammar	Grammar	Grammar, Comp. 4
	Physiology		Physiology		
	Recess	*Recess*	*Recess*	*Recess*	*Recess*
	Spelling	Spelling	Spelling	Spelling	Spelling
5th	Geography	Geography	Geography	Geography	Geography
	Prac. Arith.	Prac. Arith.	Prac. Arith.	Prac. Arith.	Prac. Arith.
	Recess	*Recess*	*Recess*	*Recess*	*Recess*
	U. S. Hist.	U. S. Hist.	U. S. Hist.	U. S. Hist.	U. S. Hist., El. 1 and 3
	Noon	*Noon*	*Noon*	*Noon*	*Noon*
	Grammar	Grammar	Grammar	Grammar	Grammar, Comp. 1
	Arithmetic	Physiology	Arithmetic	Physiology	Or. Arith.
	Recess	*Recess*	*Recess*	*Recess*	*Recess*
	Spelling	Spelling	Spelling	Spelling	Spelling
4th	Geography	Geography	Geography	Geography	Geog., Map D. 1
	Prac. Arith.	Prac. Arith.	Prac. Arith.	Prac. Arith.	Prac. Arith.
	Recess	*Recess*	*Recess*	*Recess*	*Recess*
	U. S. Hist.	U. S. Hist.	U. S. Hist.	U. S. Hist.	U. S. Hist., El. 1 and 3
	Noon	*Noon*	*Noon*	*Noon*	*Noon*
	Grammar	Grammar	Grammar	Grammar	Grammar, Comp. 1
	Arithmetic	Physiology	Arithmetic	Physiology	Or. Arith.
	Recess	*Recess*	*Recess*	*Recess*	*Recess*
	Spelling	Spelling	Spelling	Spelling	Spelling

RULES FOR ORDER

1. *Golden Rule.*
2. *Quiet.*
3. *Observe, think, study, and work,* during school hours.
4. *Play, romp, and jump,* on playground at intermissions only.
5. Move quietly and orderly at all times, within the school building.
6. Be respectful to the old and kind to the young and weak.

RULES FOR STUDY

1. All mental lessons (meaning memory lessons) shall and must be prepared at home.
2. Practical mathematics may be worked in school, but can be done at home, provided the memory lessons are prepared first.
3. All pupils should have a home schedule for reference and for use of parents, who should be interested enough to see that the *children comply* with it at all times or they cannot expect much progress.

The six Rules for Order and the three Rules for Study used at Woodsboro, Maryland, probably indicate common practice in schools, though such rules may not, in general, be so formulated. "Observe, think, study, and work, during school hours" characterizes the conduct of the school, at least as intended by the teacher. Work, work, work are three keynotes of the school, both as planned by the teacher and as understood by the pupils. The very nature of the subject matter constituting the various studies scarcely admits of anything other than work: spelling, arithmetic, grammar, geography, etc. Serious effort is expected in each subject by every pupil. But even if pupils do clearly understand that serious work is expected during school hours, they find some time for leisure. They show this by quietly gazing into space or laying their heads upon the desks and taking a rest, though they are not tired. They also find some time for play — even against the rules. Play will come out, usually in some form of mischief. But such leisure and play are not a provision of the school. Work alone is planned for school hours.

It is probable that this plan for work, to the exclusion of play or leisure, in the school program is due largely to an unconscious adherence on the part of school officials to custom rather than to a thoughtful selection of work as alone meriting a place in schoolroom occupations.

Recess and noon. "Play, romp, and jump, on playground at intermissions only." The intermissions are provided for leisure, rest, and recreation. Again, the intention of school

officials and the impression upon school pupils seem to be in agreement. The recess period is a period of relief from study and recitation. Its real purpose is, not to provide the pupils with instruction and exercise for the development of better play, but merely to insure better work during school hours. There are at least two evidences of this. One is the almost universal custom of scheduling the recess midway between the opening of school and the noon intermission. If the afternoon session is three hours in length, a recess is usually scheduled midway between noon and the closing of school. Better evidence of this purpose of the recess is seen in the fact that the play activities of recess periods are not under the guidance of the teacher or school officials. Pupils are left free except when they transgress the rules of order or intrude upon the rights of others. In some schools a playground director is employed or the teachers take charge. But such schools are the exception, and even in such schools the presence of playground director or teacher is too generally for the purpose of preventing disorder rather than improving the play activities.

It may safely be concluded that rarely is the occupation of the school planned for other than work. The schools give almost no attention to the leisure phase of life pointed out in the previous section.

Effect upon pupils. Such a régime cannot but have a marked influence upon the attitude of children toward both work and leisure. An immediate effect is that pupils are disposed to take as much recess as possible and do as little work as possible. Perhaps this statement is too strong, but it will be generally admitted that pupils are glad when recess time appears and sorry when it closes. This might mean that pupils prefer play to work; recess is more delightful than study. Much depends upon the nature of the work. " Good fun it is to yoke up the calves and play

work; there is not a boy on the farm but would rather drive a yoke of oxen at real work." [1] Recess arranged as relief cannot but give pupils the impression that schoolroom study and recitation are recognized by even the school authorities as either too hard for the pupils or too unpleasant to pursue without this relaxation for the purpose of renewing energy and reviving interest. Pupils do really become tired in following the usual schedule, and recess has seemed — still seems — necessary. If school authorities are convinced that the work of school hours, indicated by the typical schedules above, is to be continued, undoubtedly the recess must continue — and continue as a relief period. It is probable, however, that pupils become tired by reason of restraint and work which is to them unsatisfactory, rather than as a result of strenuous effort. Elsewhere in this volume it is pointed out that were the school work more suited to the tastes and abilities of the pupils the recess as now used would not be needed.

The traditional recess probably has a later effect upon pupils of no less, and perhaps of more, importance than that noted in the previous paragraph. The studies referred to in the first section of this chapter indicate that the pool-room, the saloon, the movies, and other common forms of amusement are generally sought as a relief from unwelcome toil. The traditional school recess must not, of course, be held wholly responsible for this relation between toil and relaxation in adult life. There is, however, a very close correspondence. If school life and habits are to influence later life and habits, may not that effect appear in this particular as well as in any other? In early life children quite generally learn to consider work as something unwelcome, to be relieved at times by most welcome relaxation. Thus work becomes irksome and recess periods serve to make

[1] Warner, C. D., *Being a Boy*, page 2.

such work tolerable. The habit of regarding work as tolerable only in anticipation of a period of amusement is not conducive to the best attitude toward work or to the best selection of the best relaxation.

Just here is another serious defect in our traditional alternation of school work and school recess. Pupils are left ignorant of what wholesome leisure may be substituted for unwholesome idleness. The school recess does not provide instruction in the means of spending leisure time. Why do 74 per cent of boys' gangs spend their leisure time in predatory activities — stealing, injuring property, etc.? Why do 70 per cent of these gangs engage in fighting? What is the explanation for 67 per cent of these gangs finding their fun in plaguing people and 45 per cent in smoking?[1] Why do 60 per cent of laboring men patronize the movies in their spare time, and 30 per cent the saloon?[2] Why do so many of our city boys and girls attend to so great an extent the public dance halls and other places of degrading amusement?[3] One answer is suggested by Jane Addams. We must recognize the spontaneous joy and the clamor for pleasure exhibited by these young people when freed from work. We must take note of how private enterprise has attempted to meet the situation by providing a great variety of places for amusement; but these places are commercialized and the moral effect is detrimental. Miss Addams suggests that the public provide places for wholesome leisure. Public parks, playgrounds, libraries, museums — these are having their wholesome influence; they are educative to all who attend. Experience is a good teacher, but the process is slow. Here is the opportunity and responsibility for the school. The traditional school makes no

[1] Puffer, J. A., *The Boy and His Gang*, page 40.
[2] Bevans, G. E., *Outlook* for April 4, 1914.
[3] Addams, Jane, *The Spirit of Youth and the City Street.*

provision for definite instruction in the wholesome spending of leisure time. This is a problem for the new school.

A WORK AND LEISURE SCHEDULE

Instruction in work and leisure. In view of the social and industrial conditions pointed out earlier in this chapter, it seems clear that the modern school must feel under obligation *to help boys and girls do better* in both work and leisure. It has been twenty years since Professor Hanus wrote, "To live completely means to be as useful as possible and to be happy. By usefulness is meant service, i.e., any activity which promotes the material or the spiritual interests of mankind, one or both. To be happy one must enjoy both his work and his leisure."[1] Few school men or writers have expressed this problem as an important one for schools. It is, therefore, not surprising that the school program is essentially one of work. Helping children spend leisure time and preparing them to spend well their leisure later in life have not become a part of schoolroom occupation. How leisure time may be well spent is a large problem for the student of community welfare. "All work and no play makes Jack a dull boy" is not pure fiction. Play, amusement, and leisure represent one phase of life — both child and adult — precisely as work represents another phase. The former is a biological and social necessity as the latter is an economical and educational necessity. Once clearly recognize these two phases of life and it is evident that the school can adequately help boys and girls only by instructing them in both work and leisure.

This does not mean that courses — studies — in work and leisure be given and that children study about leisure. Children learn to work by working. They learn to employ well their leisure time by being provided with leisure and

[1] Hanus, P. H., *Educational Aims and Educational Values*, page 5.

with guidance in using that leisure. The curriculum proposed in this volume is an attempt to provide for both work and leisure. The schedule is not analyzed to provide for alternation of these two as though such alternation were essential. Nor, indeed, has an attempt been made to determine the relative time and attention to these two phases of school occupation. It will probably be generally accepted that among the younger children time for work is less and for leisure more; among older pupils the relation is reversed. It must also be recognized that the line of demarcation between activities of work and activities of leisure is not absolute. What is work to one may be leisure to another. Close distinctions are not necessary.

Provision for work. In Chapter Thirteen one subject, observation, is presented and in Chapter Sixteen handwork is described as another subject. These two subjects are regarded as work for the pupils. Observation is a study of the pupil's environment for the purpose of better adjustment. Adjustment is very complex, for human life and its environment are very complex. And we must not expect that adequate adjustment is to be acquired only through the studies outlined in Chapter Seventeen. However, the most important step in adjusting oneself to his environment is becoming informed about that environment. This, in the main, calls for conscious effort guided by purpose. This is work. The subject of handwork is also of the nature of work rather than leisure. In some schools it is used as an attractive element, affording entertainment and relief from work; but such a purpose for handwork is denied a place in the curriculum herein proposed; yet too close a distinction must not be insisted upon.[1] There are times when some handwork of a purely leisure character is done. For example, in connection with certain play activities a boy

[1] See pages 307–308 for distinction between play and work.

wishes to use a clock-spring motor for propelling a toy boat. Handwork is needed to construct the boat or make necessary adjustments. However, in the main, handwork as a school study should be an activity in which conscious effort is guided by purpose.

Observation [1] and handwork [1] provide *work* for pupils. In the lower grades about two and one half hours each day may be devoted profitably to this work. In the upper grades about three and one half hours may be devoted to work.

Provision for leisure. Play [1] and the enjoyment of stories [1] are arranged for the leisure of pupils. As a chapter is devoted later to each of these topics, a mere mention here is sufficient.

In normal life out of school play occupies a large portion of the children's time. A large share of the children's time is leisure time. Some students of play advocate a rather definite arrangement of games and play activities according to the age or development periods of children. There is probably some reasonableness in this, but there is great danger that such a program belongs more to men's theory than to children's activities. However, it may safely be said that children in the lower grades are disposed to play a great variety of games, while older children play comparatively few games, but spend much time in various occupations of really play character. Thus, in the first two or three grades, definite provision is made for playing games, strictly for the fun and childish satisfaction in such activities. Emphasis is upon present enjoyment. Effort is constantly expended to help the pupils play better than they ever played before, for the sake of increased pleasure. Incidentally, these pupils are thus preparing themselves to better enjoy their games and plays in later leisure time. These playful occupations of older children, when games are

[1] These four studies are presented in Chapters Thirteen to Sixteen.

less prominent, are called play activities.[1] Such play activities are seen when boys tinker with motors, machines, old clocks, Yale locks, and the like. Girls amuse themselves in modifications of household activities; they play tea parties, doll families, and school. And there are play activities in which boys and girls engage together: making collections of insects, flowers, and seeds; making scrapbooks of stamps, cartoons, bits of humor; solving mechanical and geometrical puzzles; acting charades and dramatics.

Folk dancing and marching, with special emphasis on the folk dancing, clearly contribute to the leisure time of pupils. Girls greatly enjoy folk dancing and boys enjoy marching — especially with suitable music. Boys and girls together find real pleasure in both the dancing and marching. Both of these may be classed here as play, or of the play activity character.

In the lower grades one hour and a half daily may advisedly be devoted to these forms of spending leisure. In the upper grades this time may be considerably reduced. This leisure time must not be identified with recess periods and noonings. The proper spending of leisure time is a problem for school study. Leisure thus belongs to school occupation.

Another form of spending leisure time is found in the enjoyment of stories. Little children enjoy Mother Goose stories; boys and girls read storybooks; over ninety per cent[2] of workmen read the newspapers. A very large portion of the reading is for the enjoyment of leisure time. Emphasis in the lower grades should be upon the enjoyment of the story rather than learning to read for the purpose of reading later. In the upper grades pupils should be helped to enjoy the story instead of studying the selection as a basis for language work or for supplementary information in geography, history, and the like. This viewpoint of the use of

[1] See pages 323–326. [2] Bevans, G. E., in *Outlook* for April 4, 1914.

the story for leisure calls for a marked change in the content of our school reading books, in the method of treatment, in the nature of home work, and in the attitude of the pupils.[1]

The singing of songs and the study of pictures belong to the story group. Songs are stories expressed in music. Pictures are stories told without words. Pencil drawings and water-color representations, when not used as means of illustrating other studies, belong to the story group. Stories in a foreign language, in German, French, or Spanish, may well have a place here. Care must be taken not to make this a study of the foreign language for possible later use. Such a study would be work, not leisure. This enjoyment of stories, songs, and pictures merits as much as an hour and a half each day.

Time schedule. Care must be taken not to be arbitrary in the division of time between work and leisure. The length of the school day plays a large part in arranging the time schedule. At the University Elementary School *work*, including the two subjects, observation and handwork, occupies two and one half hours a day in the lower grades, and three and one half in the upper grades; *leisure*, including playing games, play activities, folk dances, stories, songs, and pictures, occupies three hours a day in the lower grades and two hours a day in the upper grades. This schedule may be tabulated as follows:

Work	Observation	Lower grades	9.00–10.30
		Upper grades	9.00–10.30 11.00–12.00
	Handwork	All grades	3.00–4.00
Leisure	Folk dances, Marches, Free play	All grades	10.30–11.00
	Games	Lower grades	11.00–12.00
	Stories, Songs, Pictures	All grades	1.30– 3.00
	Play activities	Upper grades (once each week)	1.30– 3.00

[1] Further discussion of this is given in Chapter Fifteen.

This is not the place to discuss the organization of a schedule. For this see the preceding chapter. But it should be here noted that the above schedule is not arranged to provide alternation of work periods and leisure periods. Neither in the nature of the occupation nor in the arrangement of the schedule is any attention given to providing relaxation or recreation on the basis of fatigue in the occupations called work. Work and leisure periods may be arranged for quite other purposes, or even by chance. This flexible schedule may be adjusted very easily to the departmental organizations of schools. One important consideration is that periods for both work and leisure should be quite long.

EFFECTS OF WORK-LEISURE SCHEDULE

Panacea impossible. Care must be taken not to ask too much of the dual schedule proposed. It cannot relieve the school of all its ills. It is advocated because experiment seems to indicate much of value in this plan. The effects are not as definite as may be asked. They are not, as yet, of a quantitative nature subject to exact measurement. Indeed, the pupil need not always be aware of whether he is occupied in work or leisure activities. Usually, however, he will be well aware of this, and later will appreciate the difference between work and leisure yet more. Four effects are here presented.

Schoolroom attitude. A pupil may well feel a difference in tension in the two periods of activities. A pupil is studying the topic of Transportation in Grade VI. A definite problem may be: How do ships pass over the hills in passing through the Panama Canal? To the pupil this study is work. Conscious effort with definite purpose is evident. He seems to be facing certain difficulties which must be overcome. There seems to be a certain necessity which

drives him on to this task.[1] In this work the pupil need not be judged as putting forth effort reluctantly, as though he were driven against his will. His attitude would probably be just that if he were not genuinely interested in his *work*. There is insufficient reason to generalize to the effect that pupils dislike work but do like play. They thoroughly enjoy work if that work be suitable to their stage of development and interests. Thus it may be expected that, without lessening their enjoyment, they show a more serious demeanor in work than they do in leisure. In work they show a sense of responsibility for certain definite achievement. In leisure there is evidence of a feeling of freedom to act under no restraint or constraint. One pupil might be reading "The Great Stone Face" in his study of character; to him it is work. Another pupil might, under quite other circumstances, read this essay as a pastime; to him it is leisure. In work tension is strengthened; in leisure tension is relieved.

Closely related to this more-or-less tension is an important schoolroom attitude known as deportment. "Poor" deportment is largely due to the difficulties the pupil experiences in adjusting himself to conditions quite foreign to his nature. The character of the subject matter has much to do with the pupil's attitude. Just this is emphasized throughout this volume. And yet, were all the school subject matter in accordance with the pupil's taste, continued stress of work would be against his nature. Subject matter adapted to tastes, abilities, and purposes of pupils, and arranged with due regard for effort in work and release in leisure, will in large measure forestall all problems of deportment. Too much attention has been given to schoolroom deportment; too little attention has been paid to the conditions that have occasioned the problem of deportment.

[1] Compare view of Kirkpatrick, E. A., *The Individual in the Making*, pages 18–24.

Another aspect of schoolroom attitude is in what may be termed "industry." By this is meant especially the pupils' disposition to work, to study, to play, to enjoy their leisure. To provide children with both work and leisure as schoolroom occupation is to meet them on their own natural ground. And they appreciate this. Initiative, self-direction, and persistency, discussed in a previous chapter as elements in efficiency, are fostered in pupils by this provision for work and leisure each day. Neither is treated as a means or reward in relation to the other. They are two phases of the natural life of children.

Both parents and the general public expect children to be "disciplined" in school. This is another aspect of schoolroom attitude affected by the work-leisure schedule. The old notion of instantaneous obedience to commands of those placed in authority still prevails, in practice, though allowed to pass in theory. Modern conceptions of social betterment are not yet widely effective in school management. It is, of course, readily recognized that school discipline has been much loosened in recent years. This is largely due to the discovery that groups of pupils can be *controlled* with much less discipline. But discipline is thus viewed too narrowly. Compliance with some rules and habits of obedience to some commands may be good so far as they go. But discipline must extend much farther. It must include a training in self-direction according to recognized needs. Children must learn to be their own disciplinarians. This is scarcely possible under the old régime. Obedience begets obedience of like nature. Again, it must be noted that the subject matter studied in school is fundamental. The old formal studies called for the discipline of obedience.[1] In real life subject matter, i.e., experience,

[1] Compare Bagley, W. C., *School Discipline*, and Holmes, Edmond, *What Is and What Might Be*, pages 3–86.

under high standards provides good discipline. A similar régime in school will be as effective.

Home improvements. Much has been said in recent years about the decadence of the American home due to the influence of modern industry and modern amusements. During the day the members of the family are at work, scattered in various places of industry as ability and opportunity provide. The home table is exchanged for the lunch counter; this may be expedient. Evenings and holidays are spent in amusement centers, according to the various stages of development and interests of members of the family. The home is deprived of leisure. The members of the family spend leisure in public places. No one agency can be held wholly responsible for such a lamentable destruction of the noblest of institutions — the family. No institution can presume to wholly remedy such sorry social conditions. But the public school may be held responsible for a considerable contribution to improvement. A family scattered for work is not so widely separated as when it is scattered for leisure. The school has aimed to prepare children for their work. It has done but little to contribute to the improvement of leisure. In recognizing leisure as a phase of life, and the problem of leisure in home and society, the school should strive to contribute no less to training children for higher forms of leisure than for more effective work. Provision in the school schedule for these two phases of life cannot but acquaint children with possibilities of leisure as well as of work. If the home is to be helped the leisure of the school must be similar to leisure needed in the home. This may be found in literature, music, art, games, and a variety of social activities. Due emphasis upon these in school will do much to develop in children a taste for such higher forms of leisure, in place of the more exciting and too generally injurious public streets,

playhouses, clubs, pool rooms, and the like. It must be recognized that some young people are without real homes and must spend leisure in public places. This situation calls strongly upon the public to provide wholesome entertainment. But this does not lessen the opportunity and responsibility of the school to contribute much to the improvement of leisure at home.

Protection from evil. It has been too generally assumed by adults that juvenile offenses are due to various forms of delinquency in these "young malefactors." A careful student of this problem has concluded that "at least 90 per cent and probably 98 per cent of first court offenders are normal." [1] The nonfunctioning home is pointed out as the chief cause for these juvenile offenses. Greatly complicated social conditions disrupt the home. The children suffer; but the parents, belonging to a previous school generation, cannot be held wholly responsible. They are incapable of inventing ways and means of occupying their children in leisure time. Here the school should stand in large measure *in loco parentis*. To develop in children the habit of finding wholesome occupation when not at work should be more and more a considerable function of the school. Such schooling cannot but contribute much to preventing juvenile offenses by occupying children when offenses are usually committed, that is, in leisure time.

Culture and refinement. President Eliot has pointed out how the idea of the cultivated man has undergone substantial changes in the last century. Earlier the literary and poetic imagination was one essential; now the scientific imagination is as imperative. Earlier the educated gentleman of leisure was regarded as one of culture and refinement; now the man of manual skill and business efficiency is admitted to this class. This change must be looked upon

[1] Travis, T., *The Young Malefactor*, page xxvi.

with favor, but with caution. There is danger that this change carry us to the point of regarding the efficient man of affairs as cultured, without reference to his mode of spending his leisure time. ". . . true culture means that a man has a mind furnished with many things beyond and above the matters which concern his livelihood; that he has breadth of view, knowledge of the world, skill in dealing with men, ability to foresee and intelligence to grapple with the complex problems which meet one every day." [1] These complex problems are of leisure as well as of work. Boys and girls in school become refined and cultured when they learn to work effectively and enjoy a wholesome leisure.

Supplementary Readings

ADDAMS, JANE. *The Spirit of Youth and the City Street*, pages 3–21, 107–135.

BOBBITT, J. F. *Education for Leisure Occupations.* See Superintendent's Report, South Bend, Indiana, 1914.

DAVENPORT, E. *Education for Efficiency*, pages 78–89.

DEWEY, J. *Democracy and Education*, pages 293–305.

ELIOT, C. W. "The New Definition of the Cultivated Man," in *Education for Efficiency*, pages 33–55.

FORBUSH, W. B. *The Coming Generation*, pages 241–270.

JAMES, W. *Talks to Teachers*, pages 199–228.

NEARING, S. *Social Adjustment*, pages 161–210.

RUEDIGER, W. C. "Avocational Guidance," in Johnston's *The Modern High School*, pages 629–653.

WILSON, W. H. *Evolution of the Country Community*, pages 189–207.

General References

BOWEN, LOUISE. *Safeguards for City Youth*, pages 12–51.

CURTIS, H. S. *Play and Recreation.*

HENDERSON, E. N. *Principles of Education*, pages 383–426.

TRAVIS, T. *The Young Malefactor*, pages 100–183.

VEBLEN, T. *The Theory of the Leisure Class.*

ZUEBLIN, C. *American Municipal Progress*, pages 228–325.

[1] Munroe, J. P., *New Demands in Education*, page 130.

Statement Outline for Chapter Thirteen

Observation of one's environment is proposed as one of the four subjects in the elementary school curriculum.

Observation plays a large rôle in the lives of children.

- Children become acquainted with their environment.
- Observation becomes a means to adjustment.

Observation has been slighted in the traditional school.

- "Nature study" has been abused by its misuse as a method.
- Geography fails to meet present needs for social adjustment.
- Arithmetic does not touch real life.

Observation is an elementary form of industrial education.

- Vocational training is demanded for vocational progress.
- Industrial education improves citizenship.

Current provisions for elementary industrial education are inadequate.

All pupils are in need of industrial intelligence.

- Industrial intelligence is a first step in vocational guidance.
- Efficient citizenship calls for industrial intelligence.

Observation is proposed as a continuous study from Grade I to Grade VIII inclusive.

The method of study demands:

- That pupils acquire much information;
- That pupils participate freely in discussion;
- That "Three R" subject matter be used as a means.

Results of this observation carry over directly into home and community life.

- Observation contributes to sympathetic intelligence.
- Three-R intelligence is made more effective.

CHAPTER THIRTEEN

School Studies — Observation

THE PLACE OF OBSERVATION IN THE CURRICULUM

A substitute for traditional subjects. In no place in this volume is it proposed that pupils should not learn in school to read, write, and cipher. It is contended, however, that a better content for study can be provided; and in the study of this content pupils will acquire the ability to read, write, and cipher as well or better than in the traditional school. Observation, as one of four such studies, is presented in this chapter. The reader is asked to consider the pupil pursuing this study in school without his thinking of reading, writing, or ciphering; but the reader is also asked to note to what extent and in what manner the pupil does read, write, and cipher.

Relative time allowed. The amount of time that may be provided for this study need not be definitely stipulated. A provisional program is shown on page 269. In this it is seen that the time may vary from three tenths of the school day in the first two grades to one half the time in the upper grades. But the nature and outline of this subject, as discussed in this chapter, suggest considerable variation in the time allowed.

OBSERVATION IN THE LIVES OF CHILDREN

Acquaintance with environment. The most frequent act of children of elementary school age is that of receiving impressions of the outside world. An almost constant stream of sensations is the experience of these little people. And in these experiences boys and girls are intensely active. "No reception without reaction, no impression without

correlative expression." [1] It is the nature of children to see, to hear, to feel what is going on about them. This sensing of their environment is the larger part of the daily life of children. It is their means of learning. And by this learning children are enabled to adjust themselves to their surroundings and to the play of events that make up life. But even the observing of what is about us may be a real act of adjustment. Children look with wonder at the Falls of Niagara; they stand in a great machine shop with attention riveted upon the unerring movements of great pieces of iron; the small boy attends the circus and observes with eyes and mouth wide open — such observation is perfect adjustment.

Further, the term " observation " is used for the purpose of emphasizing the notion that children *act* in their environment. The reaction of children toward their environment is, relatively, far more significant than the environment itself. It is not the robin, or the wind, or the grocery store, but the response of the child that is of real consequence. Much of nature study, geography, and arithmetic is taught as a subject for study, rather than with reference to effecting a definite behavior on the part of the boys and girls.

A means of adjustment. The real problem of education today is in its essentials the same as at any time: to help the individual live more successfully. In more recent years, however, this problem has been very largely discussed in terms of adjustment. In brief, the situation is this: our environment is very complex, and is becoming more and more so by reason of the ever increasing social and industrial changes. Into this " big blooming buzzing confusion " the child is born and in it he must live — if he is to live at all. The individual has no choice — he must adjust himself to these conditions, and the better the adjustment,

[1] James, W., *Talks to Teachers*, page 33.

the more successful his life. Indeed success is recorded in terms of adjustment.

In his essay on *The Meaning of Infancy*, John Fiske has pointed out in a striking way the great difference between the infancy of the human child and that of the lower animals. Fiske thus throws much light on this problem of adjustment. Among the lower animals the infant comes into life with nearly all the powers of adjustment possessed by the adult. The amœba expands in the presence of favorable environment, and contracts in the presence of unfavorable environment. The lower animal has a simple environment to which to respond and for this simple response nature makes provision before birth; thus, suitable education is provided before life begins. With the fish and turtle there is little chance for progress; they know all worth knowing for them at birth and behave satisfactorily in their environment. Higher in the scale of animals this period of infancy is a period of plasticity; some learning takes place. Nevertheless, these animals need learn little, for their environment is still simple.

Man has a period of plasticity during about one third of his life. His environment is much more complicated — so much so, indeed, that nature cannot equip him before birth. The child is endowed with power to breathe, to nurse, to cry, to move his limbs in spasmodic ways. This is sufficient at the start. Fiske points out that in the evolution of mankind, "this steady increase of intelligence . . . . . carried with it a steady prolongation of infancy. As mental life became more complex and various, as the things to be learned kept ever multiplying, less and less could be done before birth, more and more must be left to be done in the early years of life. So instead of being born with a few simple capacities thoroughly organized, man came at last to be born with the germs of many complex capacities which

were reserved to be unfolded and enhanced or checked and stifled by the incidents of personal experience in each individual."[1] It is this period of infancy that makes man's progress possible. Infancy plays a great rôle in evolution. It was a long step in his development when man made use of the simplest of tools in adapting himself to his physical environment. But in the development of civilization an increasing demand is made for intelligence to guide in the use of tools. Higher intelligence is demanded to enable man to adjust himself to his social and spiritual environment. Here is where man's environment becomes conspicuously complicated. Fiske's meaning of infancy in terms of adjustment would call for an ever increasing period of infancy, because environment, physical, social, and intellectual, is more and more complex, making adjustment more and more difficult.

In normal life out of school boys and girls of elementary school age have many complex experiences. The "big blooming buzzing confusion" which Professor James noted in the new-born child is found in the experience of most children in the midst of their present environment. This is conspicuously the case in the larger centers of social and industrial life; it is also true in most of school life.[2] This confusion is merely the natural result of failure to understand the many impressions made upon the child. To help children clear up this confusion is the purpose of observation in the curriculum. This is to be accomplished by helping children become acquainted more directly with all the complexities of the environment in which they live. These great complications for the child are too generally not appreciated by the adult. It is true that even the adult experiences many complications in his life but, compared

[1] Fiske, John, *The Meaning of Infancy*, page 11.
[2] George Madden Martin describes in *Emmy Lou* a typical case.

with the child, his world of environment is more simple. The adult has, through years of experience, so adjusted himself that to many sights he is blind, to many sounds deaf, to many other possible experiences insensible. Nonresponse to such has led to nonimpression. Then, too, experience has enabled the adult to comprehend the sensations selected. This means for him an environment less complex. Thus the adult, from his viewpoint, too often fails to adequately appreciate the difficulties of the child and his peculiar need of help.

OBSERVATION AND TRADITIONAL SCHOOL SUBJECTS

The misuse of nature study. Nature study has contributed much to the enrichment of the curriculum, especially in the lower grades. It is, however, difficult, if not impossible, to accurately estimate the influence this study has had in the elementary schools. By many it has been regarded as one of the fads and frills of modern education; by many it has been given a place in the curriculum on a par with the Three R's and other studies; but the substance of this nature study is found, in recent years, in subjects otherwise named, such as home life, seasonal life, elementary science, observation. It is also linked closely with geography, with physiology, with language, and with drawing. In such connections nature study serves as an introduction to geography, an extension of physiology, an occasion for the use of language, and an opportunity for drawing. By reason of the fact that nature study deals with simple realities in the environment of boys and girls, it has found a permanent place in the curriculum, whether with a title of its own or as a quiet force influencing the character of other studies.

The history of nature study as such is brief.[1] As one step

[1] See Bailey, L. H., *The Nature-Study Idea*, pages 6–13.

in the development of a great pedagogical principle, it comes to us from earlier generations and points in the direction of marked development in coming years. Nature study is a development of the earlier object-teaching. It is one of the natural products of the influence of Pestalozzi, Rousseau, Froebel, and Sheldon. It is one expression of the reaction against empty formalism and the appeal to the realities of normal environment. Nature study is not a phase of science; it is a method of children's behavior in the midst of their surroundings. In so far as nature study is clearly identified with the normal environment of little people, just so far will it have a permanent place in the development of the idea that we must get away from the teaching of empty formalism and attend to acquainting children with the realities of their own environment.

This nature-study movement has contributed much. However, misconceptions as to its place in a large educational movement have led to its misuse — even its abuse — in many schools, and there is good reason for its being regarded by many as one of the fads and frills of modern education. Only two of these misconceptions may be considered here.

Nature study has been too generally regarded as a school method. By the very character of its subject matter it suggests the earlier object-method: the idea that children learn by sensing the objective in their environment. Teachers of arithmetic, geography, and the like have taken advantage of this suggestion and have objectified to a considerable extent their work in these subjects. So far, procedure is creditable, but these same teachers, when teaching language, composition, spelling, writing, or drawing, *abuse* nature study by using its content rather than its suggested method. Pupils are assigned language lessons about the flowers, they are asked to spell the names of trees, to write about phenomena in earth or sky, to make drawings of birds, to

cipher on distribution of plant life.[1] The subject matter of nature study is thus used as an instrument in the teaching of these formal subjects. This is the real abuse of nature study: it has not been made a " study " in the curriculum, coördinate with arithmetic, geography, and other common branches.[2] It is pointed out in this chapter and elsewhere in this book that nature study, expanded to the subject observation, should be regarded as superior in value to arithmetic, geography, language, etc. Common practice has reduced nature study to serve as a mere method or device for teaching other subjects.

Closely allied with this conception of the service of nature study is the fact that comparatively little attention is given to the subject. The average amount of time allowed in ten of the leading cities of the United States is only 3.4 per cent of the time devoted to the nineteen different subjects comprising the curriculum for the grades. This is only one sixth the time devoted to reading; one seventh the time devoted to language, composition, writing, and spelling; one fifth the time allowed for arithmetic; and one half the time given to drawing. Reading, language, arithmetic, and drawing are all essentially formal studies, in themselves not immediately related to the real life activities of boys and girls. Nature study, which is intended to include the real environment of children of school age, is allowed less than one thirtieth of the time given to these formal subjects.[3] This was a small fractional part twenty years ago; it seems to be even less now, or none at all. Nature study does not appear in the tabulation of studies in fifty representative cities.[4] " Where we found such a record as ' Nature-study

[1] Compare Comstock, E. A., *Manual of Nature-Study*, pages 16–20.
[2] Compare Bailey, L. H., *The Nature-Study Idea*, page 18.
[3] Payne, B. R., *Public Elementary School Curricula*, page 39.
[4] Holmes, H. W., Fourteenth Year Book of the Society for Study of Education.

included under reading in Grades I, II, and III,' we gave the whole allotment to reading, under which it was published."

This slight shown nature study is doubtless explained by the strong hold which the traditional curriculum has upon both the schools and the community. More than this, the possible significance of a developed nature study has not yet become understood or appreciated. Nature study has been abused because it is too superficially conceived by the rank and file of teachers who use it as a method, and because it is too indefinitely conceived by a few promoters who have regarded nature study as an inspiration, an ideal, a point of view, a source of " will to do good " and " power to create happiness," a " nature-sympathy." As a school subject nature study has made no considerable advancement. Nevertheless, it must be recognized as an important influence in the modern tendency in elementary education. Object-teaching and nature study are clearly reactions against empty formalism, and, taken in conjunction with the more recent demands for education of a practical sort, make more striking the tendency to study the real things in our complex environment.

Thus it seems that *the tendency in our own educational practices is at present to insist that our elementary school pupils be helped to study directly those phases of their own environment that have to do with their own everyday life.* Observation is a new subject proposed, for the purpose of suggesting the importance of helping pupils *observe* more widely in their own surroundings. As pointed out above, this observing is the first step in adjusting oneself to environment; and this continual adjusting *is* the large part of the life of little people.

The failure of geography. Geography, as usually presented in schools by both teachers and texts, is a description

of the earth as the home of man. An unbiased but critical examination of this study of geography cannot but convince one that the emphasis has been much more upon the earth as such, with comparatively little attention to the " home " of man, his social and industrial activities. Most texts are encyclopedic in character of content, but unfortunately not so in arrangement. Most texts in geography are arranged on the basis of place. This arrangement is not objectionable for classes that " go through " the book, but as a ready source for information or for the study of a particular environment the text is of little service.

A greater weakness than that of arrangement is that of the content itself. This content lacks the fullness of detail needed to develop adequately any phase of the social-industrial activities that constitute important parts of the environment of children. On the other hand, these texts contain on almost every page encyclopedic information that seldom contributes directly to the improvement of the every-day life of the pupils. Unfortunately, authors and teachers are prone to consider the course completed only when they have traversed the whole earth. In some of the recent books a marked change is suggested. In the preface of one of these is the statement: " In pursuance of emphasis on the human side of geography, the materials and modes of life, industry, and trade are given more than the usual proportion of attention. . . . routes of transportation and the contribution of the whole world to the needs of a single community can be so studied as to give the pupil inspiring ideas of the unity of the world and its people." One might expect the change suggested, had the following statement in the latter part of the preface not been made: " The map is the central feature in geographic instruction." Almost unlimited map questions, such as, " Compare the longitudes of Cape Race and Cape St. Roque; of Panama and Hudson

Bay; of Panama and Cape Mendocino," indicate this central feature.

Mere locality does not constitute the chief environment of people, nor a knowledge of this the leading means of adjustment. The behavior of peoples in their social and industrial relationships is the environment of most consequence to people. To understand and appreciate this is the significant means of adjustment. In his *Type Studies from the Geography of the United States*, McMurry goes far toward the understanding of environment for the purpose of adjustment, but his type studies are too predominantly place-geography and contain too little description of the social-industrial activities of peoples. This is the failure of geography to meet present needs of adjustment.

The formality of arithmetic. Arithmetic is strictly a form subject. Only in its " applications " does it touch real life. And these applications are for the purpose of supplying means of approach or methods of motivation in arithmetic as a disciplinary study. School arithmetic has not yet approached the study of quantitative aspects of our environment and our real adjustments.

Similarly, other subjects of the traditional curriculum fail to supply pupils with the study of environment needed for adjustment.

OBSERVATION AND INDUSTRIAL EDUCATION

The demand for vocational training. Special training for the leading professions has been provided for generations. Schools of journalism, agriculture, commerce, and education are typical of later development. But in more recent times attention has been directed to vocational training in the interests of a greater variety of workers. Thus trade schools, technological schools, and apprenticeship schools

have developed to meet the demand for more effectual preparation for the various employments.

The demand for industrial education. The development of social and industrial activities has led in recent years to a demand for a type of education less technical than vocational training, and more far-reaching in its effects. This demand comes primarily from "the common man who must do common things." [1] This common man is rapidly developing into a man of power in a democracy. He realizes that his efficiency as a common man in this democratic country depends upon intelligence, not of the old "liberal arts," but of the new industrial and social life. And the cause of the common man has been championed by men who are leaders in educational, social, and industrial activity.[2] It has become clear that the culture of the liberal arts is too restrictive in its nature and too limited, considering the comparatively few who reach the higher stages of our educational scheme. An industrial education for the common man is needed to help him face labor troubles with better insight and self-control; to help him substitute intelligent interest for monotonous drudgery in his work; to help him find more leisure time and spend it better. On the side of the community, too, it must be said that industrial education for the common man is demanded. The welfare of the society depends upon the intelligence of the masses as well as the leadership of the few; and only as the general populace is advanced does the community get satisfactory returns for the large investments in educational institutions.

[1] This significant expression comes from Robinson's chapter on "History for the Common Man" in his book, *The New History*.

[2] For representative writers of this class see: Addams, Jane, *Democracy and Social Ethics;* Davenport, E., *Education for Efficiency;* Dean, A. D., *The Worker and the State;* Carlton, *Education and Industrial Evolution;* Hanus, P. H., *The Beginnings of Industrial Education;* Leake, A. H., *Industrial Education;* Leavitt, F. M., *Examples of Industrial Education;* Weeks, Ruth, *The People's School.*

Institutions for industrial education. Professional schools connected with higher educational institutions have led the way. Technological and trade schools have followed. In more recent years continuation schools have been planned to connect the general training of the grade schools and the apprenticeship work in industries. Vocational high schools and part-time coöperative schools have a similar purpose. Industrial schools vary greatly in character and scope. The latest schools to develop are the prevocational schools. These are usually connected with the grade schools, though in the main confined to the upper grades.[1]

WEAKNESS OF PRESENT PROVISIONS FOR INDUSTRIAL EDUCATION

The principle of "seeping down." This practical education for the common people seems to be coming slowly, but only as it seeps down into the lowest schools from the higher. Under the influence of a general demand and also of the junior high school movement, this prevocational school work has reached as low as the seventh grade. In such schools over-age pupils who have not reached this grade — probably never could under the present organization — are enrolled. The serious defect of this policy of arranging for this work only as it seeps downward is that a constructive principle is largely wanting and the real purpose for such industrial education is greatly restricted. Prevocational and industrial schools do not reach the masses. The great majority — indeed all — of the people in a democratic country need an intelligent insight into the social-industrial activities which constitute this chief environment. The present principle of organization for industrial education fails to take this into account.

[1] Leavitt and Brown, *Prevocational Education in the Public Schools;* Leavitt, *Examples of Industrial Education.*

Present basis of selection. Three types of pupils are usually selected for these prevocational and industrial schools:[1] (1) Those who are retarded and are regarded as failures in the traditional school; (2) those who are stamped as troublesome, slow, uninterested, inattentive, in the traditional work; (3) those whose circumstances indicate that schooling will be limited.

This basis is remedial at best. The purpose thus seems to be corrective and only for those who do not profit in the traditional work. There is the implication, too, that this industrial intelligence is needed only by the traditional school failures. To the extent that intelligent insight and appreciation of the complex life in which we live are deemed important for all, the present basis of organization fails to reach those not belonging to the three classes listed above.

A device of teaching. It was pointed out in Chapter Nine that the interests of children in their own activities and the affairs of community life are frequently used — misused — as a device for enlisting pupils' interests in the portions of the school work that do not appeal directly to them. Quite representative of this policy are the following statements: "The usual school subjects must be vitalized or 'motivated' anew." "These boys must be led to discover that there is a real use for percentage." "An adequate amount of repetition of any school subject can be secured by some such expedient as that of drawing the child's attention to the parallel between drill in school work and the infinite amount of practice performed in every walk of life in the real world." "In organizing prevocational classes, therefore, the plan commonly employed is to make the shopwork central and paramount, not, perhaps, because it really is of greater

[1] See Leavitt and Brown, *Prevocational Education in the Public Schools*, pages 36 *seq.*

value, but because it appeals to the boys as being so." [1] If the study of real life must be used as a device for studying schoolroom subjects, there is danger that industrial education will never make great progress.

Vocational training and industrial intelligence. It is to be feared that insufficient distinction is made between a training for a definite vocation and a study of social and industrial conditions. One is for the particular worker, the other is for all citizens. On the basis of this distinction all pupils n school should be given acquaintance with a great variety of human activities; vocational training should be selected by individuals according to interests and needs.

THE NEED OF INDUSTRIAL INTELLIGENCE

Vocational guidance. The importance of vocational education has led to the problem of vocational guidance. The effectiveness of such guidance must depend largely upon the pupils' acquaintance with a wide range of possibilities in selection of vocations. Trained in the eight years' course of formal subjects in the grades, the pupil entering a vocational high school, continuation school, or trade school will frequently be troubled in making his selection. He has too little industrial insight.[2]

Industrial intelligence and citizenship. In addition to the need of industrial intelligence for the individual in selecting a vocation, the community demands this more and more of its citizens. General intelligence about the affairs of life is a great asset for citizenship.

The service of observation. Observation as a school subject is here planned as one important factor in natural

[1] Leavitt and Brown, *Prevocational Education in Public Schools*, pages 72, 73, 75, 76.

[2] Dr. Kerschensteiner, once Director of Education in Munich, recognized this as a weakness in the relation of the grade schools and the continuation schools.

development.[1] In his discussion of Rousseau's idea of natural education, Dewey says, "In short, if education is the proper growth of tendencies and powers, attention to the process of growing *in the particular form in which it goes on from day to day* is the only way of making secure the accomplishments of adult life." [2] Observation is a school study of this type. It is proposed in this subject to help pupils study directly the environment in which they live, and thus help them to adjustment by a continual readjustment.

OBSERVATION ARRANGED FOR SCHOOL WORK

Program must be flexible. The program here suggested and more fully outlined in Chapter Seventeen is that used at the University Elementary School. It admits of much variation to suit local and personal conditions. The principle of organization discussed in Chapter Eleven governs the work outlined. The work is designated for certain grades, but this division is unimportant. It must be insisted that the topic studied must be adapted to the individual, not the reverse.

Observation for Grades I and II. In these two grades the work has been organized under four divisions: 1, Plant life. 2, Animal life. 3, Earth and sky. 4, People. This classification is, perhaps, extremely arbitrary. In early stages children make no classifications, naturally; yet this grouping of phenomena seems to be understood and appreciated by pupils of these grades. And these four groups include the various phenomena affecting the behavior of children and interesting them.

As these groups include all that may be of concern to older pupils also, the question at once arises: What will define the nature and limit the scope of work for these two grades?

[1] In his *Schools of Tomorrow*, Dewey describes the University Elementary School under the title, "Four Factors in Natural Growth."

[2] Dewey, J., *Schools of Tomorrow*, page 6.

Indefiniteness will be judged by the traditional teacher as the weakness of this program. But this very indefiniteness provides real opportunity for the teacher who would be constructive and not mechanical in her work. From this viewpoint, indefiniteness adds strength to the program. The interests and abilities of the pupils, both collectively and individually, must govern largely. However, one principle may have much influence; namely, little people are essentially self-centered. Their interests are in those phases of environment that very directly affect themselves. Children are interested in flowers chiefly because their color or fragrance affords pleasure.

> I was rich in flowers and trees,
> Humming birds and honey bees;
> For my sport the squirrel played,
> Plied the snouted mole his spade.
> For my taste the blackberry cone
> Purpled over hedge and stone;
> Laughed the brook for my delight,
> Through the day and through the night.

Whittier's barefoot boy was self-centered in his observations of nature. His environment was his own. The particular topics, some of which are listed in the outlines in Chapter Seventeen, have been chosen with such a self-centered interest in control. The particular birds, flowers, phenomena in earth and sky, and behaviors of people will vary in different localities. But so many of these are nearly universal that they are suitable in most schools. Children are interested in people in so far as people contribute directly to the comfort or the pleasure of children.

The substance of the first three divisions of observation for these two grades is somewhat related to nature study and elementary science in the traditional school. In scope and method of treatment, however, the two are quite dif-

ferent. The fourth division, people, has little relation to the traditional school except as it supplies topics for morning talks and moral instruction. Within this group such individual topics as, "How people help one another," "How people keep neat and tidy," "How people keep warm in winter," "How people go about," become real problems for study, lasting several days, with one and a half hours' attention each day. Here is a phase of children's environment where adjustment is very important.

Local industries for Grades III and IV. Increase in experience leads little people to find interests in the activities of others, where such activities do not so directly affect them. As Whittier's barefoot boy adds:

> Still, as my horizon grew,
> Larger grew my riches too.

These interests in the activities of others are still somewhat centered in self, as these children early learn how their own welfare is dependent upon others. Boys and girls, especially those from about eight to ten years of age, are keen observers as they go into town and about the community. They are inquisitive and show an active interest in the activities of community life.

> And children coming home from school
> Look in at the open door;
> They love to see the flaming forge,
> And hear the bellows roar,
> And catch the burning sparks that fly
> Like chaff from the threshing-floor.

After the blacksmith shop, they pass the print shop and through the large windows look intently at the printing press. They eagerly wish for the chance to get in behind the moving wheels and levers to see how it all goes on. The fire department, the post office, the meat market, the grocery

store — these and many other such places are of great interest to these young people, and they constitute a great part of the environment to which adjustment should be made.[1]

This subject, called local industries, arranged for third and fourth grades, must necessarily be local. That is, the topics must vary according to the locality. Yet in most communities there is much that is common: the post office, fire department, grocery store, etc. In some towns a flour mill may be found, but no dairy; in another a dairy, but no mill; but an industry not found in a given place is not a part of the immediate environment and therefore not that to which adjustment need be made at once, by pupils as immature as those in Grades III and IV. In large cities these industrial activities are much more numerous and more complicated than third- and fourth-grade pupils can understand and appreciate; in country and rural places the limitations call for more intensive study of fewer topics. In all cases, selection must be made and emphasis given according to adjustments needed.

Social-industrial activities for Grades V and VI, or even V to VIII. Real environment is not limited to space; or at least, spatial environment varies with experience and interests. As children develop their interests widen. Environment no longer connotes only the surrounding locality. The whole world, and all the forces and phenomena of nature which affect the lives of children rather directly must be included in the term "environment." Children of about ten years of age, on the basis of a fair amount of experience, become interested in affairs throughout the world. They begin to understand how dependent they are on the industries, means of transportation, methods of manufacture, processes in production, various occupations, manner of life, forms of government, and governmental activities in other countries.

[1] Other topics are outlined in Chapter Seventeen.

These are phases of a larger environment to which adjustments must be made by all intelligent and efficient citizens. These social-industrial [1] activities become, therefore, the topics for study in the upper grades. These activities belong to the subject observation, though the means and methods of carrying on this observing are different from those used in the first grades, where pupils observe directly rather than indirectly through books.

Observation in Grades V to VIII of industrial, social, and political events is merely a means by which the pupils become acquainted with important phases of their environment. The doings of peoples constitute the largest part of the environment of peoples, young or old. In the outlines for Grades I and II observation included plant and animal life, and earth and sky. These divisions are not definitely provided for as such in these upper grades. The emphasis is upon observing people and their activities. But pupils do not study transportation long before they are led to study land and water formations, for mountains, valleys, lakes, rivers, etc., are large factors in the problem of transportation. Nor will the phenomena of the sky be neglected. Winds and rains affect transportation. Sun, moon, and stars make their own contributions to navigation. In mining, in lumbering, in manufacturing, in farming, etc., plant and animal life, also earth and sky phenomena, become subordinate topics for study. Environment is of first importance in human activities, other phenomena are secondary.

The extent to which the junior high school movement has developed makes it questionable if provision should be made here for Grades VII and VIII. Thus far the junior high school is little more than a name for a slight change in organization. The content of work has been modified but

[1] This term is used rather loosely for want of a term that is more definite.

little. One part of the *theory* of the junior high school calls for subject matter similar to that presented here; namely, that which appeals more directly to the practical interests of pupils of this stage of advancement. Organization of the junior high school or that of the traditional seventh and eighth grades is quite secondary to the curriculum for these grades. The study of these social-industrial activities is appropriate for either the two upper grades of the elementary school or the first two years of the junior high school. However, the outline of work for these two years is, at the appearance of this volume, not yet worked out to any satisfactory extent. This work is developing as a study of vocations with special reference to helping boys and girls in choosing their life work. Industrial intelligence of a more general nature and scope is the leading aim in Grades V and VI. In Grades VII and VIII the aim is to lead pupils to try their likes and prove their tastes.

METHOD OF STUDY

Method must not be definite. In teaching the formal traditional subjects the method may be formal and prescribed. In these studies of industrial activities, "circumstances alter cases" to such an extent that method must be too variable to be prescribed. Further, method may be quite formal where formal teaching is emphasized. In the work here proposed coöperative study by teacher and pupils is characteristic. Method cannot play so prominent a part, but must be shifting according to circumstances. Even the topics in any grade need not be taken up in a definite order. The teacher, the pupils, or various circumstances must be the determining factor. This is likely to be disconcerting to the particularizing superintendent or supervisor, but it should be liberalizing to teacher and pupil. The latter is more important.

Two general problems of method are sufficient for the discussion here. We are first concerned with getting information. As noted above, becoming acquainted with environment is the chief step in adjustment. But passive impression without active expression means little. Therefore, some attention must be given to the forms and extent of expression as means of furthering the pupil's development.

Sources of information. Direct observation is probably the most effective manner of acquiring information. "Personal experience," "back to nature," "from the concrete to the abstract," "the objective method," "nature study" — these pedagogical notions have one common basis: direct experience. Most of the traditional curriculum does not admit of this. It is too abstract, not itself objective. The content of this study in observation invites teachers and pupils to study outside the schoolroom to a great extent. The excursion is the most feasible and effective means.

Space does not permit a presentation of the details of conducting efficiently excursions in the study of these topics. The discussion needed may be only outlined.

1. An excursion should be preceded by schoolroom conference. The observer sees most who anticipates something of what he is to observe. It is here that a little of that much-used and much-abused principle of apperception is used. In this conference the teacher and the pupils may discover points on which they disagree; they may discover their own lack of information and the indefiniteness of their knowledge. Questions of genuine interest will be raised, but there are two serious dangers that should be avoided: one is that the teacher will conduct this conference as a "recitation" to test the pupils' knowledge; the other is that the teacher will impose upon the pupils an organization of the material to be observed. It is important that the conference be informal and that no semblance of organization

be made until pupils have collected enough information to be organized.

2. While upon an excursion, e.g., to the flour mill, post office, or railway station, systematic order in observing should be avoided. When observing, impressions are wanted. The order of arrangement or the process of an industry may be constructed later. This calls for more thought and study, and ample time must be provided. Let the pupils observe closely, but seldom take notes. What the pupils do not remember individually or jointly is not worth " scribbling " down in notebooks. Credit must be given the business man or employee for being able to *teach* the pupils and teacher something of his own work. It ought not to be necessary to insist that such excursions warrant school time and that they ought not to be treated as so subordinate as to be indulged in only when the school is not in session. The excursion properly conducted means school extension. Such school excursions should lead individual pupils to make further observations and inquiries.

3. The excursion must be supplemented by classroom study: reading and discussion. These serve also as two other sources of information.

Textbooks alone are insufficient for supplementing excursions. The geography approaches the need more satisfactorily than other textbooks, but it is very far from supplying sufficient information. A library is indispensable. It can be clearly shown that the traditional school pupil is famishing for want of book information. In place of forty copies of the text, the forty pupils should have forty different books, which means nearly forty times the information usually supplied.[1] Abundant reading should be provided but not assigned for recitation, and must be regarded as supplemen-

[1] The reader is referred to Appendix B for a list of books used by Grades I and II and reference materials in certain other topics studied.

tary to the excursion or previous observations. Some pupils must be allowed and expected to read more, some less, precisely as some see more, some less on an excursion. These reading periods will necessarily vary in order and in length of time. As a rule, longer periods are needed for study on such assignments than the traditional school schedule allows.

Excursions and individual readings encourage pupils to talk. The conference should be arranged at irregular times: usually each day, but not necessarily so, and on some days there may be more than one conference. Govern reading by recitation requirements and pupils lose interest in the topic studied. Let the conference be held when there is evidence to teacher and pupils that the class has something to talk about; then both reading and conference are motivated in a normal way. This class conference contributes much information to the individual members, as each contributes from his own readings and the findings of all are pooled for the general good. This class conference has a further effect of so developing the habit of inquiry and research in the pupils that conferences with people outside of school are quite common.

Development through expression. The conference has already been referred to as a source of information. It also serves as a most natural and excellent form of expression. Written reports are likely to be required to too great an extent. Some reports as records of work are quite in place. These records of observation and study should be prepared only as pupils can, in the main, be led to feel that such records contribute to their understanding of the topic. These reports, especially in intermediate and upper grades, should be strikingly individualistic; they should be more than mere compositions in English; they should include such drawings, clippings of pictures, arithmetical calculations, maps, and other forms of illustration as may make expression

more clear. Moreover, these records should be inclusive of rather large topics and bound in booklets suitably covered.

Relation to the Three R's. The traditional school teacher is here again warned that these studies are not to be used as an omnibus for the "common branches." Attention should be directed to the topic of observation without reference to the Three R's. On the other hand, an effective study of a topic — or of several topics — will require considerable amount of Three R material. However, the Three R's will not be presented according to the traditional school system. Such is the case in real life. In the conferences suggested above, "language" is studied under the best of conditions; "silent reading" is provided in large quantities in the library work; "oral reading" is frequent in the conferences by way of supplying information, and that under the strongest motive for good reading, viz., supplying to others what may be of profit to them; "drawing" is called for as a short but effective means of describing; "arithmetic" is used wherever quantitative problems are relevant to the topic studied and in such cases it is strictly the "practical" arithmetic now so much advocated; "geography" as a study of people living and working upon the earth is inherent in most of these observation topics; "writing" is called for in all the written reports and records. Indeed it may be concluded here as elsewhere[1] that the best way to teach reading, writing, arithmetic, and all the other formal and incidental school subjects is *not to teach* them as such, but to use their content in the most effective way possible in the study of phases of real life.

RESULTS

Sympathetic intelligence. What results may be expected in such a study of various phenomena in the environment of

[1] See Chapter Eighteen.

children of elementary school age must be somewhat indefinite at best. It is a sympathetic intelligence in regard to the commonplace affairs of everyday life. Pupils who have had seven or eight years of this observation are quite well informed. Information contributes much toward appreciation and sympathetic attitude. Just this is greatly needed for the welfare of any community. The indefiniteness of this result is liable to disconcert many school teachers and school administrators, but life outside of school is no more definite, and we are not yet prepared to insist upon definiteness by means of some scientific standard or measure.

The mere habit of observing is conspicuous for its absence among most people, both the younger and the older. Whittier presented his Barefoot Boy as a good observer — limited in this case to certain types of nature environment. While such habits of observing are natural, the habit of wide observation is not sufficiently prevalent. Sympathetic intelligence, so essential to full participation in community life, is dependent upon the habit of observing widely in social and natural environment. The school study, observation, presented in this chapter and partially illustrated by outlines in Chapter Seventeen, is planned to help boys and girls develop that habit so much needed in community life.

Three-R intelligence. We are accustomed to look for school products in terms of Three-R information and skill. In the previous section it was pointed out that these common branches would be more effectively studied if treated as incidental to the study of problems in real life. Some scientific evidence of this is given in Chapter Nineteen. It is here insisted that a knowledge of arithmetic is futile except as it functions in real situations. This is equally true with regard to other school subjects. Observation is presented

in this chapter as a study where the traditional subjects do play this part, but always a subordinate part.

Serious dangers. Two serious dangers are apparent. One is that the teacher will use these observation studies as mere means of motivating school work in the common branches. To that extent, the study of environment will be subordinated and adjustment seriously affected. The other danger is that in her eagerness to free herself from the traditional Three R's the teacher may slight important aspects of these instruments of real life. Quantitative aspects of mining, manufacturing, and transportation will be given too little attention; expression in good English form, oral or written, may be neglected. To avoid these dangers it is necessary to give to each topic studied the fullest possible treatment consistent with the place of that topic in real life, subject always to the limitations in the materials for study and the abilities of the pupils.

Supplementary Readings

ADDAMS, JANE. *Democracy and Social Ethics*, pages 137–220.

BAILEY, L. H. *The Nature-Study Idea.*

CARNEY, MABEL. *Country Life and the Country School*, pages 302–327.

COLE, P. R. *Industrial Education in Elementary Schools.*

DAVENPORT, E. *Education for Efficiency*, pages 11–36, 60–77.

HANUS, P. H. *Beginnings of Industrial Education*, pages 1–98.

KERSCHENSTEINER, G. *The Idea of the Industrial School.*

LEAKE, A. H. *Industrial Education*, pages 43–58, 163–172.

LEAVITT, F. M. *Examples of Industrial Education*, pages 1–51.

LEAVITT, F. M., and BROWN, EDITH. *Prevocational Education in the Public Schools.*

PUFFER, J. A. *Vocational Education*, pages 24–56, 128–144.

Report: *The Place of Industries in Public Education.* National Education Association, 1910, pages 680–710.

ROBINSON, J. H. *The New History*, pages 132–153.

RUSSELL, J. E. "The School and Industrial Life." *Educational Review*, Vol. 38, pages 433–450.

WEEKS, RUTH. *The People's School*, pages 38–56.

General References

BLOOMFIELD, M. *The Vocational Guidance of Youth.*

BOOK, W. F. First Annual Report on Vocational Education in Indiana, 1914.

DAVIS, J. B. *Vocational and Moral Guidance.*

DOPP, KATHERINE. *The Place of Industries in Elementary Education.*

DRAPER, A. S. *Trade Schools.*

DUNN, A. W. *The Social Studies in Secondary Education.* Bureau of Education, Bulletin No. 28, 1916.

HODGE, C. F. *Nature-Study and Life.*

LAPP, J. A., and MOTE, C. H. *Learning to Earn.*

PARSONS, F. *Choosing a Vocation.*

SNEDDEN, D. *The Problem of Vocational Education.*

Survey: *Facts about the Public Schools of New Orleans in Relation to Vocation,* 1914.

Statement Outline for Chapter Fourteen

Play is proposed as one of four subjects in the elementary school curriculum.
- Play as a normal activity of children becomes a school subject.
- Play is not mere recreation.
- Work is work and play is play.
- Traditional objections to play are futile.

"Education through play" is a misconception.
- Play has been justified as a means of inducing children to work.
- Thus play is used as a method of teaching.
- Play of children is abused by subordinating it to the formal school arts.

Play through education is a more valuable concept.
- Play is properly justified as one of the normal and wholesome activities of children.
- Children need instruction to improve their play.
  - The Three R's may be of service.
- Play may thus be a normal motive for that school work which tends to improve the play.

Games may be easily scheduled.
- There is danger in stressing periods in play life.
- Play is instinctive, but children should be taught the games to be played.

There are play-activities other than games.

Play must be conducted for its chief value; i.e., *fun*. By-products of play must be strictly incidental.

Theories of play are more academic than useful.
- Play as release of surplus energy is biologically unsound.
- Play as nature's method of education is an injustice to children's mode of living.
- Play as race recapitulation has no educational significance.

Play is simply one phase of the normal life of children.

CHAPTER FOURTEEN

School Studies — Play

PLAY IN THE CURRICULUM

Play as a study. Play is presented in this chapter as one of four studies outlined in this volume as a curriculum for the elementary school. The other three studies are: observation, stories, and handwork. Play is given a place coördinate with the others, though the amount of time proposed for it is not so great as for the others. Were the Three R's of the traditional curriculum to remain unchanged, the addition of this study, play, might be quite out of place. Play is not of the same character as reading, writing, arithmetic, and language. It could not be arranged as a study coördinate with them. Play merits a place in the curriculum strictly upon the principle presented in Chapter Nine: The curriculum should be selected directly from real life and be expressed in terms of the activities of people. The function of the school should be to help boys and girls do better in all their activities that are normal and wholesome. Play is one of the normal and wholesome activities of children. It cannot be assumed that children play well enough. It must be admitted that there is room for improvement in play and that this improvement is one of the demands made by society. It must not be overlooked that the spirit of play and the means and manner of playing are two very distinct things. By nature children are inclined to play. Play is instinctive. Children do not need to be taught to play, though many do seem to be quite lacking in this instinctive tendency to play which is so much a part of the lives of the young and which contributes so much incidentally to their development. But there is great need that the means and manner of playing be improved.

Such a need gives opportunity and responsibility to the school.

This problem will appeal to parents and communities to just the extent that play is recognized as an important phase of everyday life. If one looks upon play as superfluous, there can be no grounds for its admission to the curriculum.

Play and recreation. Play is not mere recreation. It is a phase of life coördinate with work. Recess at school is for the purpose of recreation. It is quite erroneously regarded as the only time for play. Play is thus made a means of recuperating from the strain of work or of preparing for serious tasks. A period for recess is almost universally provided in school schedules. This is usually for ten, fifteen, or twenty minutes about the middle of the forenoon or afternoon session. Its purpose is relief from the strain of schoolroom occupation. Thus recreation at the recess period is only an instrument in providing a continuance of energy in the prosecution of work. Outside of school the clerk or business man takes a vacation of two weeks for recreation in view of return to work with renewed strength. Provision for recreation is virtually a recognition that work has been carried on beyond the endurance of the worker. As recreation, play has no claim for a place in the curriculum. There is a greater need that, through the curriculum, a study be made of the improvement of work so that human energy will not be overtaxed and recreation demanded.

But play is a phase of life which is coördinate with work. Play has always been a conspicuous part in human life. The Olympian games of the Greeks, the gladiatorial combats of the Romans, the folk dances of the peasantry of Europe, the war dances of the American Indians — these were play activities and not mere recreation as a relief from work.

Even in adult life not all of one's energy and time should be required for work. To a much greater extent play should be a part of the life of children. To help children live better is the justification for the study of play in the school curriculum. On this ground, play merits a place coördinate with any study that refers to the activities of normal life.

The spirit of play. School children should be taught to play games for the sake of having the most wholesome fun possible. This does not mean that children should be taught to keep in mind fun as their object. Hawthorne has somewhere said, " Happiness in this world, when it comes, comes incidentally. Make it an object of pursuit, and it leads us a wild goose chase, and is never attained. Follow some other object, and very possibly we may find that we have caught happiness without dreaming of it; but likely enough it is gone the moment we say to ourselves, 'Here it is!' " The richest fun is experienced when children simply lose themselves in the vigor of their activity. Something of this play spirit is the adult's when he is at some work in which he is genuinely interested. But the spirit of play is very different from genuine pleasure experienced in agreeable work. " The work of cutting down the big weeds gets on slowly, although it is not very disagreeable, or would not be if it were play. John imagines that yonder big thistle is some whiskered villain, of whom he has read in a fairy book, and he advances on him with 'Die, ruffian!' and slashes off his head with the billhook; or he charges upon the rows of mullein stalks as if they were rebels in regimental ranks, and hews them down without mercy. What fun it might be if there were only another boy there to help." [1] This work was too serious for the spirit of play which John had, and a companion was needed to make possible the fun which John craved. There is serious danger of failure if

[1] Warner, C. D., *Being a Boy*, pages 17–19.

effort is made to conduct work in the spirit of play and no less danger of abusing play if an attempt is made to use it as an instrument in work. The dinner bell rang before John had finished with the weeds and the one who wanted fun in play was disappointed because he was unable to forget himself and his duty toward the weeds. One who works most successfully keeps in mind the purpose for which he labors. One who really plays becomes wholly unconscious of fun as his purpose in play. Indeed he is so completely engrossed in the play activity that he even forgets himself. Here is a fundamental difference between work and play. It is essentially a difference in the consciousness of purpose for which the work or the play activity is carried on.[1]

Closely connected with this distinction between work and play is the more usual one. The compensation for work appears only after the work is finished. Play is its own reward. The professional ball player becomes really a professional ball "worker." Play has become work by reason of postponement of reward. Work may become play only when the later reward is wholly disregarded and when that reward becomes pure joy in the work itself.

Work is still work and play is play. Each is a phase of life. The improvement of each is the function of education. On such a basis play cannot be denied its place in the curriculum.

Traditional objections. In spite of the fact that some educational leaders during several centuries have recognized the value of play in the lives of children, educational practice has almost forbidden play in the curriculum and even in the schoolroom. Traditional practice is opposed to this progressive theory. Play is recognized as an instinct in children. All are disposed to play. But in the usual school the exhibition of play divides the pupils into two

[1] Compare Groos, K., *The Play of Man*, page 387.

classes: the good and the "bad." The good pupil is the one whose instinct to play is held under control; the bad pupil is the one in whom this spirit of play is beyond control. The instinct to play is recognized as natural. But tradition believes in holding in abeyance this instinct. The traditionalist is also wont to look upon play as strictly puerile. It is opposed to effective work. "Life is real, life is earnest." The school is life; therefore, school must be real and earnest. Play is puerile; work is manly.[1] The service of elementary education is to discipline children away from play and to train them into work. "When I became a man I put away childish things"; children should be trained to put away this childish play as early as possible. Further, tradition quite generally looks upon play as a means of fondling children where rigorous discipline is much more needed. Play is thus regarded as an instrument in the hands of those who have only tender sympathy instead of wholesome strength in the management of children. "So with coddling and dawdling and marking time, and playing at work and 'working' the 'dear teacher,' he [the pupil] emerges, not merely inert of mind and morals, but pervert."[2]

But such objections need not be taken too seriously, though there are some grounds for the sharp criticism. The "bad" boy is not so bad after all. He is mischievous, but only because he will have a little rightful pleasure, even at the slight discomfiture of another. The child is intent on fun, not mischief. This mischievous act may be judged by the adult as wrong. To the boy it is only one of many steps in his growth.[3] The so-called "bad" boy is too generally judged by standards properly suited to quite other

[1] Compare one of the regulations of a college about 1785, "The pupils in this school shall engage in nothing that the world calls play; for those who play when they are young will play when they are old."

[2] Gayley, C. M., *Idols*, pages 114–115.

[3] Compare Judd, C. H., *Genetic Psychology for Teachers*, page 116.

stages in his development. Play is not incompatible with work. Indeed these are two phases of one life. Moreover, while some play is of the coddling type, the best and truest play is not without the discipline that makes for wholesome development. Tradition has been opposed to play in education, and with some reason. However, play may be so wisely conducted as to merit the highest regard of adults and yet afford the best of fun for the children.

"EDUCATION THROUGH PLAY" — A MISCONCEPTION

Assigned justification for play. Play seems to have been discovered by some as a good means of inducing pupils to work. This service is then assigned as its justification. Children seem to have a passion for play. Adults believe in the necessity for work. They also too generally regard children as indisposed to work. But if this disposition to play can be used to propel children to work, what a gain there is! If play can be really used, it may merit a place in the school. To take this position is to rank play as an activity of children subordinate in value to work. Only on the basis of its *use* in the furtherance of work activities is it to be justified.

This relation of play to work seems to be in the minds of those who are the strongest advocates of more play for children. "Since the Berlin Play Congress in 1894 the sentiment has grown that these (games) are of national importance and are preferable to gymnastics both for soul and body. Hence we have play-schools, teachers, yards, and courses, both for their own value and also to turn on the play impulse to aid in the drudgery of school work." [1] "The use of play in the schools of today" is the topic discussed by one of these play leaders. "But a far more

[1] Hall, G. S., *Youth*, page 113.

serious and important problem confronts us when we endeavor to make systematic use of real play in education. . . . The effect of the use of play on school work in general is worthy of mention. . . . Teachers who had regularly made use of games in the afternoon session were unanimous in saying that the games revived the children, gave an added zest to their study, and made them more quiet and responsive. . . . Very much of the school work in nature study may be accomplished through play. . . . Nothing could be simpler than to utilize these play interests in gaining a knowledge of the fauna and flora of a given locality." [1] *Education through Play* [2] is the title of a very substantial volume on this service of play to education. In his chapter on "Play," Dewey advocates this use of play: "Schools all over the country are at present making use of the child's instinct for play, by using organized games, toy making, or other construction based on play motives as part of the regular curriculum. . . . The educational value of this play is obvious. It teaches the children about the world they live in." [3] These four prominent writers on play and education thus express the prevailing theory and practice of play in relation to education. Whatever be the traditional or contemporary objections to play as an activity in the lives of little people, play is thus justified to the extent that it is of use in promoting work.

Play as a means of instruction. Service as a justification for play is a clear declaration that play is an instrument to be used in teaching. Long ago Rabelais proposed teaching elementary mathematics through play. Locke advised playing dice as a means of teaching the vowels and consonants. Basedow taught Latin in playing soldiers. This use of play is quite in vogue today. Children are readily

[1] Johnson, G. E., *Education by Plays and Games*, pages 40, 44.
[2] Curtis, H. S. [3] Dewey, J., *Schools of Tomorrow*, pages 107, 108.

observed as having strong inclinations to play. This instinctive activity is promptly seized upon as a most excellent instrument in teaching, especially in teaching a subject difficult or distasteful to children.

From the work of one of our prominent writers on play [1] a few typical illustrations may be taken.

One game is called "Arithmetical Races." "Choose sides. When all are ready disclose examples which have been concealed from sight. The side that has the larger number of correct answers within a given time wins."

In geography one of the games is described: "Sides are chosen. The leader of one side begins by calling out the name of some city beginning with A. Before ten can be counted the leader on the other side must name another city beginning with A. The second player on the first side then takes up the game, and so on. Whoever misses is put out of the game. The side having most players left at the end of the game wins."

In history a certain game is called "Famous Numbers." "Numbers are written upon cards or slips of paper. These are drawn and the players tell for what the number is famous. For example, 13 may be said to be famous because of the thirteen American Colonies."

In language the game of "Adverbs" is suggested. "An adverb is chosen, unknown to one of the players. This player must question the others on a certain subject and infer the adverb chosen from the manner in which his questions are answered."

This use of play seems to place this instinctive activity in the same category with artificial incentives and devices, so generally found in the traditional school. These incentives have long been used and are still quite in evidence. A quarter of a century ago these incentives were classified

[1] Johnson, G. E., *Education by Plays and Games*, pages 193–203.

as: "*Prizes*, as medals, books, class honors, merit tickets, etc.; *privileges*, as holidays, early dismissals from school, 'honor seats,' positions as monitors, etc.; *immunities*, as exemptions from tasks, class exercises, etc." [1]

Such "incentives" are essentially mere means of inducing pupils to "lay hold" of their tasks. Such means are justified on the principle that "all is well that ends well." The Three-R subject matter is the end to be accomplished. These incentives, now including play to a much greater extent than in earlier years, are ascribed real values on the basis of their service.

Abuse of "education through play." In spite of the results that seem to be gained through this use of play, it must be maintained that this beautiful instinctive activity is wrongly used, even to its abuse. The chief abuse is in the assignment of wrong relative values. True, there is no universally accepted rating of values among the various studies and other activities of both the child and the adult population. But probably most people will accept the very general principle that those activities are the more valuable that contribute the more constantly and effectively to the normal everyday lives of people. Play is more and more regarded as one of the normal phases of child life — to say nothing of its rôle in adult life. To the extent, then, that playing games is used as a means of teaching adverbs, or names of cities with the initial letter A, to that extent the more valuable is made to serve the less valuable. At the risk of using a crude illustration, this abuse of play may be likened to the use the beggar made of a good coat — to patch a poor one, on the ground that the latter needed it the more. If the essentially normal activities of children are to be used as instruments in teaching the formal school subjects, such activities as breathing and eating may be used to teach

[1] White, E. E., *School Management*, page 132.

number combinations. Two country boys visit the chicken house and vie with each other in eating raw eggs from the shell; the one who swallowed fourteen eggs devoured one and one sixth as many as the other; how many did the other consume? This actual case might be repeated in modified form as an exercise in teaching various numerical combinations. This practice would be a gross abuse of the normal activity of eating. But one need not observe extensively in schools to note how play is abused in being humiliated to a plane far below the number combinations which it is made to serve. Relative values are overlooked.

But of more significance, from the viewpoint of the boy and girl who really appreciate play, is the misuse or even abuse of the child's motive. The child's motive in play is distinctively genuine. That is, he is instinctively inclined to enter heartily into play activities. Naturally the child's object is simple, wholesome pleasure, though this is not thus formulated in his consciousness. In the hands of the teacher who uses play as an instrument the real object is the securing of certain Three-R subject matter. The pupil is not to know, until later, what the teacher is accomplishing. Quintilian favored making instruction an amusement to children, so he used ivory figures of letters to play with. Locke said: "The chief art is to make all that they have to do *sport* and play." With these earlier teachers, as with many today, the motive of the teacher is quite other than the motive of the pupil. The child is *fooled* into doing something he would not intentionally do. Or, in other words, he is *paid* to do what without that compensation in play he would be indisposed to do. But children are too shrewd to be long deceived and too businesslike to be long satisfied with a feigned compensation.

Further, play is misused by its treatment as an omnibus in which to carry all the hard work, all the many difficulties,

and all the distasteful experiences of school life. Play is in itself highly motivated, consistently vitalized. How natural it is that the careworn teacher should use it to the fullest extent possible! This highly motivated play leads the teacher to attempt to make all work play. This play-method of teaching becomes a fad. Here is good ground for the scathing criticism that the modern school pupil does not learn the seriousness of work and the real cost of effort.

Play thus used as a means of instruction is a serious reflection upon the subject matter taught or the teacher teaching. *Something is wrong* when so much ingenuity is required in adapting games as means of securing ends in certain traditional subject matter.[1] There is something abnormal in school work if those activities of children that are normal to them out of school must be used as the motives and the means of giving instruction in forms of education not found in normal life.

Students, teachers, and writers who advocate more attention to play should be encouraged in this attitude in so far as they advocate play for its own sake as a phase of normal life. However, there seems to be no need for the attempt to justify play in education only as a means of teaching or learning. Teachers of manual training and art crafts very generally justify their work in the curriculum on the basis of the occasion provided for arithmetical calculation, for drawing and design, for attracting pupils to school, etc. This attitude implies that the manual and artistic crafts are not to be justified aside from their relation to other subjects. The justification for play and for various of the manual arts may well be found in the simple fact that they are phases of normal life. From this viewpoint neither play nor the manual arts can be justifiably used as *means*

[1] This situation will be further discussed in Chapter Eighteen.

of teaching any of the formal school subjects. Instead, then, of promoting education through the instrumentality of play, play itself should be developed through education.

PLAY THROUGH EDUCATION

Justification for play. The mere fact that play is recognized as one phase of the normal life of children justifies its place in the curriculum. The problem of relative values cannot be overlooked at this point. Arithmetic has held an important place in the curriculum on the basis of its being a *tool* in real life. In arithmetic and in other common branches the pupil studies the instruments he is expected to use later in real life. Tradition accepts the usefulness of such tools as the justification for their high places in the curriculum. As has been pointed out in earlier chapters, there is a marked tendency in modern education to call for more attention to the direct study of real life in place of the instruments of real life. This tendency is simply a change in the relative values which society is assigning to real activities in life and the means of conducting those activities. In his shop, store, or bank, the blacksmith, the grocer, or the cashier does not experience "arithmetic." He *uses* arithmetical subject matter in his work. Such work is one phase of real life to this adult. To children of elementary school age play is no less a normal and essential phase of their lives. Real life, as an end, is of more value than school studies, as a means. Thus the place which play has in the lives of children is its justification for recognition in school, where the purpose is *to help boys and girls do better in all those wholesome activities in which they normally engage.*

Function of education. In helping children to play better, education finds a specific function. Social efficiency without specific reference is too indefinite to mean much. When

analyzed in terms of real life the function of education is to improve the varied social and industrial activities of people. The instruments of this education are, by common consent and experience, found in the usual school studies, reading, writing, arithmetic, etc. The grocer finds that a knowledge of certain arithmetical combinations contributes to his success. But this arithmetical knowledge is quite subordinate to his knowledge of the kinds and qualities of his goods and the needs of his customers. His chief study is his customers and his goods. Arithmetic functions as a means in this specific form of life.

Similarly in the play life of children, the leading problem is that of relationship to playmates and the selection of play materials. The study is largely a social one. Now to the extent that subject matter in arithmetic, language, drawing, etc., can contribute to the improvement of these play activities, to that extent education in terms of the common branches functions just as it does in the life of the grocer and the banker.

Play and the Three R's. This view of the function of education reverses the relative values usually assigned to the Three R's and play. *Education through play* subordinates a phase of real life — play — to the position of means in the acquisition of knowledge of forms and processes in arithmetic, reading, writing, etc. This view can be held only by those who would regard the play life of children as a mere means to something more valuable. Or, perhaps, the advocates of play are afraid to rely upon the inherent value of play and so compromise with their own ideals and permit play to be subordinated to the formalities of the traditional subjects. *Play through education* reverses the relative values. Like commerce and industry, play calls upon the Three R's for such assistance as can be rendered by them. But in play the greatest problem is probably a

social one. How can children play more beautifully together? How can they appreciate more highly the good playing of others? How can they play more skillfully without at the same time interfering with the skillful playing of others? In short, how can the play life of children be carried on with more wholesome pleasure to all concerned? Improvement in play along these lines will be made largely by practice, not by theory. But close observation convinces one that play is not only improved by practice but is also helped by the means of subject matter included in the traditional subjects of reading, arithmetic, drawing, language, etc. Numbers will help the players in measuring and recording relative skill in games where individual competition is prominent. Drawing will frequently help children in observing more closely posture and movement that contribute to the success of players. The reading of reports of their games as played or of stories of games played by other children contributes to the thoughtfulness and the skill of the children. This study, in consequence, means better results and greater satisfaction.

Play must not be used as a means or device in securing better number work by the pupils. Numbers should be used in betterment of the game. The common branches are of value in relation to the service they can render to the activities of real life. Play is above service as a means. It is a phase of life to be served by the common branches.

Play as a motive in school work. Much has been said of play as a motive in school work. To the extent that this motive is appealed to for the purpose of securing a more favorable attitude of the pupil toward the traditional school work, to that extent education is acquired through play. This abuse was discussed above. But there is another aspect of the play motive. Quite in contrast to the motiva-

tion of arithmetic, geography, etc., for which teachers expend so much energy, play itself is strongly motivated. Pupils are strongly disposed to play. Under normal circumstances no effort is required to induce children to play. To take advantage of this motive and use it as a means of inducing response to arithmetic is an injustice to the play inclination and to the child. On the other hand, if this motive is recognized and if provision is made for its realization in play activities, just treatment of the instinct is shown. The realization of strong play motives will be accompanied by wider acquaintance with number combinations, by increase in ability to use better language forms, both oral and written, by some facility in drawing, etc. The motive for play should be encouraged, for the sake of the play, not as an aid to arithmetic. Arithmetic may be said to be motivated only in so far as its subject matter is clearly used as a means of improving the play.

GAMES USED IN PLAY

Periods in play life. Much has been written upon the periods in the play life of children.[1] Such periods or stages are suggested as: the mere frolic stage; the imitative or dramatic stage; the stage of self-assertion or individual initiative; the stage of loyalty or that period when the sense of social relationship becomes strong. Then, too, more specific age periods are marked out, for example:

Period One (ages 0–3). This is the period of physical adjustment. Physical movements are of the nature of play activities.

Period Two (ages 4–6). The motor side of life is prominent. Imitation is characteristic of play at this time.

[1] Compare Johnson, G. E., *Education by Plays and Games*, pages 65–222; Lee, Joseph, "Playground Education," *Educational Review*, Vol. 22, pages 449–471.

Period Three (ages 7–9). This is a period of lull in physical development. The aimless romping period is over. The child plays games where results are of interest.

Period Four (ages 10–12). "The child is at the height of physical activity. More games are played now than at any other age." A great variety of games is in demand.

Period Five (Ages 13–15). This is the period of most rapid growth. Competitive and coöperative games calling for great physical activity are in demand.

Such emphasis upon stages or periods in the play life of children is seemingly based upon studies in the physical and psychical changes in child life.[1] But the practical school man dealing constantly with children in the everyday school cannot but be somewhat skeptical of the correspondence of these periods with the normal play activities. There is serious danger of robbing children of the beautiful spirit in play if games are arranged by the adult in accordance with his own classification. The child in his activities is much more a creature of his environment than a subject of age or stage periods. Boys play at marbles in alleyways and in unfrequented parkways in springtime rather than in "period four." Spinning tops and shooting marbles are good "signs of spring." Neither men nor babies play at either, but boys of all ages engage in these pleasurable activities. Children are very susceptible to suggestion. Like sheep, they follow a good leader. They are quite ready to play a great variety of games (if physically qualified) when a good leader enters heart and soul into their play. Here is the opportunity for the teacher at school.

Play and games. Children need not be taught to play. To play is instinctive. What to play and how to play are the teacher's problems. Games are exercises for play.

[1] For interesting classifications of periods of childhood, see Chamberlain, A. F., *The Child*, pages 51–105.

There are play activities which are not to be classed as games. Little lambs gambol over the meadow. Children run about in great glee. Games are those playful activities that are governed by some regulations. Many games call for considerable intellectual effort in following the regulations or in judging of ways and means of successful competition. Appropriate regulations enrich the game. Intellectual effort in guiding one's play adds greatly to the real fun in the activity. Animals and savages play without thinking, but children in civilized communities get more real fun and satisfaction in their playing when such playing is, to some extent, under the direction of the intellect. Games are the instruments thus used in play. Thinking has much to do with the wholesome fun in good baseball. Modern football calls for concentration of mind as well as muscle. Compare the real fun in these well-directed games with that in " scrub " baseball and the earlier thoughtless kicking of the football.

Nature of games. The usual recess play is for recreation only. Recess is a period for relaxation. There is too little time allowed then for much directed play. Play discussed in this chapter is intended for school time as other subjects. The games used must provide wholesome fun for the children, but more, they must help children to play better. If the thoughtful game contributes more genuine pleasure to the civilized child than the mere thoughtless frolic, games that are truly developmental should be arranged. Great care must be taken that the thought element is real and enriches the game, not feigned and a mere encumbrance. As an example of the latter take a bean-bag game for children of the lower grades. The bags are pitched into concentric square boxes. The teacher arranges that a score of ten be allowed for each bag tossed into the outermost of the three boxes; five for each bag reaching the middle box;

and one for each bag entering the inner box. Here is an arbitrary assignment of values in reverse order of skill required in tossing the bags. The teacher who arranges such a game evidently has her thought upon certain number combinations rather than upon the game and the thoughtful use of numbers to enhance the fun in the game.

Care must be taken that the games are wholesome. Games which expose the weakness of a player to the taunts of others are out of place. Games which are silly and pointless should be discarded. Only games which have a refining influence should be used. Only those games should be used in school which may be used, as such or in a slightly modified form, out of school. Teachers and parents must be constant judges of the character of the games.

Classification of games. Boys and girls will seldom think of games in any classified form. One good game is a game to be played. So is another. Adults who list games classify them in many ways. The chief purpose of any classification is to assist the teacher in suggesting variety for the pupils. The games used in the curriculum at the University Elementary School are arranged in five classes, purely as a convenience to the teachers.

1. Competitive games, of two kinds:
   a. Relay or group competition.
   b. Individual competition.
2. Games largely of a physical nature.
3. Games largely of a mental nature.
4. Singing games.
5. Outdoor games.

Some selected games. A few of the games used are here listed. Each merits time and attention as one of the school studies. Each one admits of that development which calls for real study. In this respect the games vary

in value, yet some will be used but little except as recreation at recess time.

Ball	Cylinder
Bean Bag	Ruth and Jacob
Tops	Checkers
Roly Poly	Fox and Geese
Spin the Plate	Poison
Tag	Charades
Marbles	Dominoes
Tenpins	Picture Puzzle
Ring Toss	Quoits
Pitching Pennies	Duck on Rock

The bean-bag games as illustration. Space here does not permit suggestions for the development of these games. One game, partially developed, is presented in Appendix F. This game, as many others, is played in a variety of ways by pupils in the first three grades, the interest increasing from grade to grade. The interest seems to be due largely to the increasing complexity possible in the game and the consequent increase in the demand for thoughtful self-direction in playing.

PLAY ACTIVITIES — OTHER THAN GAMES

Limitations of the game. The game is largely social, and is arranged for groups of players. There are, however, some games, such as solitaire, which may be played by one individual. But children find "companions" other than boys and girls — they early learn to find certain play with nature, plant life, animal life, and physical phenomena. Since children and adults must, at times, be alone, the school is under obligation to help them "do better" in

[1] Another volume is in preparation which will give a more extended treatment of games.

their play relationship to nature as well as in games. These play activities are suggested primarily for pupils in and above Grade IV.

Various play activities. The following outline of plays with physical phenomena is given by Professor Hetherington in his report of *The Play School of 1913*.

Water. — Playing with water, pouring, wading, splashing, watching objects in water, throwing objects into water, building dams and water wheels, watching the action of water on land, "erosion models," etc., which develop problems in fluids.

Air. — Playing with air, sail-boats, kites, windmills, aëroplanes, which develop problems in air pressure, air currents, wind, temperature, humidity, rainfall, etc.

Heat. — Watching fire, making fires, observing friction and heat, playing with toy steam engines, thermometers, which develop problems in heat, combustion, expansion, and contraction, and other effects of heat.

Mechanical Devices. — Playing with hoops, tops, pulleys, wheels, toy machines, gyroscopes, pendulums, levers, watching thrown objects, balancing objects, etc., which develop problems in motor dynamics.

Sound. — Vocalization, beating and drumming, blowing on toy instruments, "listening to shells," speaking-tubes and telephones, experimenting with conduction through air, water, and timbers, with vibrating bodies, echoes, etc., which develop problems in vibration, noises, tones, music, etc.

Light. — Playing with reflectors, mirrors, prisms, lenses, water refraction, glasses, telescopes, which develop problems in light, color, optics, time, etc.

Electricity. — Experimenting and playing with magnets, batteries, induction coils, telephones, telegraph instruments, dynamos, electric motors, electric lights, etc., which present problems in electrodynamics.[1]

The group " Mechanical Devices " might include what is appropriately called " tinkering." Boys enjoy *taking apart* watches, clocks, locks, electric bells, etc., and reconstructing them. Rightly directed this becomes real training in handicrafts. In its first stages, however, it is pure play, which is the primary value here.

These play activities may also include:

[1] University of California Publications, *Education*, Vol. 5, No. 2, page 273.

1. Making collections: [1] postage stamps; coins; cartoons, political and humorous; pictures of men, scenery, industries, etc.; humorous anecdotes; choice bits of poems and important sayings. Girls make some extensive and instructive collections of textiles.

2. Preparing puzzles, tricks, magic performances, etc., so far as these are wholesome.

3. Photography and blue printing.

4. Social, literary, and dramatic activities.

5. Typewriting and job printing.

6. Constructive occupations, especially the making of toys, puzzles, and the like.

All these play activities not only *meet present needs* in the play life of children, but, secondarily, they contribute much to preparing children for various occupations which they may take up later as work. Much of the voluntary activity of children, in their leisure time, consists of the kind of activities here suggested. Such pastime employments mean much to the home and community life of children, especially boys of from nine to twelve years of age. Play activities of this kind are wholesome in contrast to the idleness and mischief into which children fall if not constantly employed and directed. The home and community profit too by this occupation of the young people. This present enjoyment is the primary purpose of these play activities. To help the boys and girls find more genuine satisfaction in such things is the opportunity and responsibility of the school.

Secondarily, but no less effectively, the children will be acquiring an interest in many activities that may be real work later. Whittier's barefoot boy and many boys of that type have acquired their best education through play

[1] G. Stanley Hall gives a long and suggestive list of collections in *Child Life and Education*, pages 205–239.

activities suggested above. But such work products are essentially by-products of these activities arranged primarily for immediate enjoyment.

CONDUCT OF PLAY IN SCHOOL

Initial stage. Playing of carefully chosen games should constitute the first exercise for the first-grade pupils on their first day at school. Six-year-old children enter school with much embarrassment and timidity. One finds one's own experience is the story of Emmy Lou,[1] in which is depicted the strangeness of the school. Children come from homes where play has been the large part of their lives. Teachers believe in the principle of apperception, but at this particularly appropriate point of application practice is quite at variance with theory. A somewhat novel game such as bean-bag relay, providing for active participation by all the pupils, puts them at once "off their guard." The game should be one in which the individual is not conspicuous when playing; it should also be one that encourages free conversation. To be unconscious of self in a strange place is the first step in good school progress. Just this step the traditional school makes impossible for the pupils on the first day. From the point of view of the nature and the experience of childhood, play merits being the initial exercise in school.

Schedule. Mark Twain was once asked to write for a weekly humorous paper. He answered in the negative, saying, "I cannot be funny at regular intervals." Objection is made by some that play should not be scheduled. As recreation, relaxation, or rest, play might well be allowed when needed. As a phase in the normal life of children, it may well be scheduled as any other activity, though the

[1] Martin, G. M., *Emmy Lou.*

ironclad schedule of the traditional school should not prevail. Circumstances should freely alter the schedule planned. On the basis of relative values play merits as much as one hour each day, especially in the first two or three grades. Except for the first few days in the first grade — as suggested above — the play hour may advisably be scheduled in the afternoon. But the "hour" should vary in length, according to circumstances, especially the interests and attitudes of the pupils. Play activities in the intermediate and upper grades probably would not merit, relative to other phases of school occupation, as much as an hour each day. An hour two or three times each week may be sufficient, but the time schedule should be governed largely by local conditions.

Active play and helpful study. Playing the game includes more than the physical activity involved. A study of how the game is played and how individual players may play better is essential. Good playing of marbles, tenpins, ball-target, and the like depends much upon posture and movement. Studying these through observation and drawings, and devising skillful ways and means of keeping score contribute to effective playing; free discussion on methods of playing adds much. Such study would be work in drawing, numbers, and language were such studies not functioning so directly in the play activities. Indeed, experience indicates that such study of the game is an inherent part in the play activity. As indicated earlier, here is the difference between the play of children and the play of lower animals. Some thinking contributes to the satisfaction of the play. The teacher must carefully guard against too much emphasis on study. There is danger that study may take precedence over the game. In such case the game becomes only a constructed opportunity for study. One principle alone can regulate this, viz., the study in observing poise

and movement, in keeping score, in discussing the method of playing, must be stopped when it ceases to contribute to the fun in the game.

VALUES IN PLAY

Chief value. The chief value of play is the most natural one, namely, fun. As insisted earlier, play is one phase in the normal life of children. Fun, personal pleasure and satisfaction, is its leading characteristic. Moreover, play functions immediately in the lives of the children. The values of work are deferred.

By-products of play. The usually assigned values of play are here regarded as only its by-products. Those who attempt to justify play as an excellent instrument in the hands of teachers to induce pupils to work supplement this value by adding other results achieved through play. A few of these may be referred to here.

1. Play fosters physical development.[1] "Play tends to develop a man of the type of Apollo rather than Hercules. Apollo is the athlete; Hercules, the gymnast. . . . Play does, however, tend to give physical efficiency, a good carriage, a full chest, a bright eye, a good complexion, grace, a stable nervous system, a good digestion, a healthy sex development, strong heart and lungs, and robust health."

2. "Play furnishes the very best mental training. Watch even a game of tag. The sense organs are all alert. The attention is focused on one point."[2] "Play is the one universal stimulus to the intelligence of the child."[3] Team play is regarded (by play leaders) as the greatest of mental stimuli.

[1] Compare Curtis, H. S., *Education through Play*, pages 17–46, and other writings listed by him on page 46.
[2] Tyler, J. M., *Growth and Education*, page 208.
[3] Curtis, H. S., *Education through Play*, page 56.

3. Play opens the way for emotional natures to express themselves. The playful individual more readily laughs, cries, and sympathizes. "Those who play together quickly become friends."

4. Play makes almost unlimited contribution to moral training. "In his play is developed the selfhood of the child. In the play of the boy are developed individuality and sense of personal power, with some sense of relation to others. In the games of youth the individual becomes subordinated to the whole." [1] The spirit of loyalty, democracy, honesty, justice, and the strength of the will, all are developed through play.[2]

Play enthusiasts make statements sufficiently sweeping to include about all that belongs to education. In one of his earlier studies, Johnson arranged four hundred and forty games to provide the all-round development of the child.[3] These games are arranged for each of the eight grades in nine groups according to the dominant purpose which they serve. These nine groups with two or three typical games for each are as follows:

Attention: Cat and Mouse, Simon Says, Baseball.
Memory: Geography, Judge and Jury.
Observation: I Spy, Fox and Geese, Jenkins Up.
Reading and Spelling: Sliced Pictures, Spelling Match, Lotto.
Language: Cupid Comes, Crambo, Novels.
Arithmetic: Buzz, Playing Store, Morra.
Geography: Rivers, Dissected Maps.
History and Biography: Authors, Literary Whist.
Physical Training: A wide range of athletic activities.

A statement by this author, referring to one of the games, is typical of the statements made in brief form of all these games: "Baseball calls for great activity of mind and body,

[1] Johnson, G. E., *Education by Plays and Games*, page 46.
[2] Curtis, H. S., *Education through Play*, pages 59–84.
[3] *Pedagogical Seminary*, Vol. 3, pages 97–133.

is excellent for the eye, muscular sense, attention, discrimination, judgment, will, self-possession, courage, quickness, hand, arm, thigh, calf; good for reasoning, chest, back, waist, abdominal muscles and neck, and is especially valuable as a general exercise."

This curriculum of games was not proposed as a practical scheme for actual school use. It was a speculative arrangement, ingeniously done. It expresses, however, just the emphasis so generally given to certain values of play. "Play, in childhood . . . is concerned with everything; emotions, feelings, acts, thoughts, imaginings, speech, all begin their career under its subtle, shaping influence. . . . Language, poetry, art, science, all begin in child-play. . . ." Perhaps it is in the belief that it is necessary to find in play all these values as means of leading people to give it more credence, that play leaders marshal together such values of play.

Play as a phase of child life. It is here recognized that the values of play are many and diversified. If these values are greater than result from the work activities of children, it is probably due to the greater number of activities and their greater range in the realm of play than in that of work. But it must be insisted that the chief purpose of play is to meet the immediate needs of child life. Play is one phase of that life. It must not be overlooked that the play life of the child is of great concern in the home and community. To play better — especially with less annoyance and less disturbance — is asked by the home and community as one of the normal modes of child behavior. Groos says: "There are numerous ways to direct the child's play to useful purposes."[1] Ethical character is pointed to as one of the products of play activities. It may readily be conceded that wholesome play does develop commendable character. But one must then ask: What is the value of character?

[1] Groos, K., *Play of Man*, page 403.

Surely, character in the abstract, isolated from contact with one's fellows, is of no value. The character of an individual is tested — valued — by its influence over his dealings with others. How much consideration is given to the character of a strict hermit? Of what value is his character so long as he has no relationship with other men? [1]

"Play at its best is only a school of ethics. It gives not only strength but courage and confidence, tends to simplify life and habits, gives energy, decision, and promptness to the will, brings consolation and peace of mind in evil days, is a resource in trouble and brings out individuality." [2] Interaction between people is the life of people. And character becomes a means of enabling an individual to conduct himself commendably among others. Thus character is of great consequence in the play of children. To play well is of value in itself, for it is the normal life of children. Character is valued according to its efficacy in promoting this play.

If virtues and values of play must be arrayed for later use as the persuasive argument for a place for play in the education of the young, it must still be insisted that such values are fundamentally secondary. Play can have no higher value than to be one phase of the normal life of children.

THEORIES OF PLAY

Theory. At the close of this discussion of play a few statements may be made on the theory of play. It has probably become evident to the reader that the theory underlying the play herein advocated is quite distinct from theories advanced by others. Theory is only an expression of principles that underlie experience. The only reason for pre-

[1] The hermit's character might of course be valued by his treatment of himself or nature about him.

[2] Hall, G. S., *Youth*, pages 76–77.

senting certain theories at the close of this discussion is to place the position taken in this chapter quite in contrast to positions so usually taken in reference to play.

Play as release of surplus energy. The surplus energy theory was propounded by Spencer. When an animal does not need all its energy to maintain its living, the unused energy is expended in activity not needed for life. This activity is called play. On the biological principle that an organ without function would soon wither away, it would be expected that in the long life of the human race, play beyond the necessities of life would cease to exist. The increasing attention given to play quite sets aside such an idea. Play does not vanish from human life as an organ no longer needed. It remains because it functions as a part of life itself and, though quite incidentally, contributes some assistance to other phases of life. Moreover, children — and *other* animals — often play far beyond the mere using of their surplus energy.

Play as a method of education. The biologist has pointed out that in the lower forms of animal life adjustment is so simple that the young are born almost into adult life. As the organism becomes more complex and adjustment more complicated, a longer period is required to learn to adjust. This is the period of infancy.[1] During this period of infancy the child plays and this play provides that education needed preparatory to the adjustments of the adult. This theory was advocated by Groos. It is easy to understand how the play of the young *does* help educate them for the activities of the adult. But must the meaning of infancy be interpreted only in relation to its contribution to adulthood? This preparatory relation of infancy to adulthood was the view emphasized by John Fiske. Increase of intelligence in the human race necessitated a prolongation of infancy,

[1] Compare Fiske, John, *The Meaning of Infancy.*

that the future adult might not only be prepared to adjust himself, but also to advance civilization. On this principle, play, as one large phase in the period of infancy, is seized upon as an effective means of educating children for adult life. It has already been conceded that play does educate; that there are valuable by-products of this instinctive activity. But to regard infancy (which Fiske grants is about one third of human life) as a mere means of preparing for adult life, and play as dominantly a method of education is to undervalue the life of children. A prolonged infancy does develop and play does educate the young; but the greatest objection to child mortality is not that the life fails to reach maturity, but that a little one is deprived of his right to live. The greatest function of children's play is in serving not as a method of development but as a mode of living.

Play as race recapitulation. The human race has probably always had some play. But many of the simpler work activities of primitive people are used now by the child as play activities. In reproducing — in modified form — the activities of the savage the modern child finds his pleasure. "I regard play as the motor habits and spirit of the past of the race, persisting in the present, as rudimentary functions sometimes of and always akin to rudimentary organs. . . . Thus we see that play is not doing things to be useful later, but it is rehearsing racial history." [1]

Racial recapitulation may *account* for play in the present generation of children to the extent of declaring that throughout history the human race has played. "In play every mood and movement is instinct with heredity. Thus we rehearse the activities of our ancestors. . . ." [2] Children reëxperience the play spirit of their forebears, and some

[1] Hall, G. S., *Adolescence*, Vol. I, pages 202, 207.
[2] *Ibid.*, page 202.

games are modifications of activities of primitive people. But the hundreds of games and means of amusement show more and more their dependence upon modern life and modern conditions.

Moreover, the theory of play as race recapitulation, when such play is mere " rehearsing racial history " and not for the purpose of being useful, becomes very much like the theory of play as the release of surplus energy. That theory does not seem plausible. Again, the theory that play is only a rehearsing of racial history is not satisfying. Unless play activities can be linked very intimately with present life or related to future effort, it cannot be justified.

Play as simply a phase of normal life. An attempt to be simple in explanation is in danger of being judged unscientific or unscholarly. But children are simple, and explanation of their lives should be as simple as possible. The view which adults take of the play life of children has much to do with their directing of such play life. Why search so much for explanations and purposes of play? Why do men work? Many work, of course, to earn their living; and many to provide for much more than mere living. The savage worked little. We may say he played little. In the light of our present civilization we say he lived little. The little work of primitive man and the great work of our twentieth century captain of industry are a manner of life, a manner of life determined by circumstances. Likewise, play is one phase of the normal life of childhood. It is found in modified form in adult life. Inquire closely for its explanation and its purpose, and life itself must be examined. The child is by nature very active. Play is *one* of his normal ways of expressing that activity.

" Groos well says that children are young because they play, and not *vice versa;* and he might have added, men grow old because they stop playing, and not conversely, for

play is, at bottom, growth. . . ." [1] Play may well be regarded by the educator and teacher without reference to its rehearsal of the activities of the past and without concern for its contribution to the education for the future, but with primary interest in it as a phase of the normal present life of children. This view prevents the abuse of play as a mere agency in learning, and leads to the treatment of children as children.

Supplementary Readings

CURTIS, H. S. *Education through Play*, pages 1–355.
DEWEY, J. *Schools of Tomorrow*, pages 103–131.
FREEMAN, F. N. *How Children Learn*, pages 56–77.
GAYLEY, C. M. *Idols*, pages 113–118.
GROOS, K. *The Play of Man*, pages 361–406.
HALL, G. S. *Youth*, pages 73–119.
JOHNSON, G. E. *Education by Plays and Games*, pages 1–222.
KIRKPATRICK, E. A. *Fundamentals of Child Study*, pages 147–164.
LEE, JOSEPH. "Playground Education." *Educational Review*, Vol. 22, pages 449–471.
MANGOLD, G. B. *Child Problems*, pages 95–116.
MERIAM, J. L. "Play as a Motive." *Proceedings of the Missouri State Teachers' Association, 1909.*
TYLER, J. M. *Growth and Education*, pages 198–217.

General References

ADDAMS, JANE. *The Spirit of Youth and the City Street.*
BALDWIN, J. M. *Social and Ethical Interpretations*, pages 148–156.
BOWEN, LOUISE. *Safeguards for City Youth at Work and at Play.*
CHAMBERLAIN, A. F. *The Child*, pages 1–105.
CURTIS, H. S. *Play and Recreation.*
ELIOT, T. D. *The Juvenile Court and the Community.*
FISKE, JOHN. *The Meaning of Infancy.*
HALL, G. S. *Adolescence*, Vol. I, pages 202–236.
HETHERINGTON, C. W. *The Demonstration Play School of 1913.*
LEE, JOSEPH. *Constructive and Preventive Philanthropy.*
REEDER, R. R. *How Two Hundred Children Live and Learn.*
ZUEBLIN, C. *American Municipal Progress*, pages 296–325.

[1] Hall, G. S., *Adolescence*, Vol. I, page 235.

Statement Outline for Chapter Fifteen

Stories, including music, poetry, and pictures, is proposed as one of four subjects in the elementary school curriculum.

Leisure in the community suggests leisure in the school.

- Leisure is one phase of civilized life.
- The story is one of the wholesome agencies in spending leisure time.
- The use of the story in leisure becomes a problem for the schools.

"Reading" in the traditional school is inadequate.

- Too little time as leisure is provided.
- Literary materials used are too meager.
- Pupils have no suitable motive for reading.

Story materials must be chosen with care.

- In the lower grades stories should be characterized by playful activity.
- In the upper grades acquaintance with a wide range of wholesome story material is an important guide to leisure reading.

The conduct of the story hour must be for the purpose of wholesome enjoyment.

- Learning to read is incidental.
- Telling of stories should be prominent.
- Individual silent reading, with occasional group conference, should predominate.

Results are gratifying.

- The amount of reading is large.
- Wholesome pleasure characterizes leisure.

CHAPTER FIFTEEN

School Studies — Stories

LEISURE AND STORIES

The problem of leisure. The general problem of leisure and the relation of the school to this problem has been presented in an earlier chapter. Leisure is considered as coördinate with work; the two constitute two phases of life. We do not work for the purpose of the leisure to be enjoyed; we do not occupy leisure time as mere recreation after fatiguing work. Work is one form of living; leisure is another form. The life of any individual is very much restricted if either work or leisure is wanting. But it must not be inferred from this that work and leisure are equal in importance and extent. Most people probably devote more time, energy, and thought to work than to leisure. The present status of society demands this. Further, work and leisure constitute the lives of children as well as adults. We may well presume that the ratio of work to leisure is larger with adults than with children. That is, a very much larger portion of the time and effort of adults is spent in productive effort than in leisure. Children spend more time and energy in leisure than they do in work. This fact suggests that the problem of the school in dealing with children is quite other than it would be were adults enrolled in school instead of children. Here again is a reminder that we must be guarded in our viewpoint. We are dealing with children, not adults.

There is danger that the school program be controlled by adult accomplishments rather than by the immediate needs of children. We must not think of story materials and the methods of treating them as instruments of the school in transforming children into adults. Such a procedure would

mean work to the children. The child has a right to his own leisure and to the story used for that purpose.

The story and forms of leisure. There is a great variety of ways of spending leisure time. Among little people playing games is prominent, perhaps predominant. In youth and adult life a variety of social amusements and activities takes the place of games in earlier years. But adults are not without their own games, such as golf, pool, cards. The playhouse in various forms, such as the moving picture and the theater, attracts large numbers of adults. The public library and periodical rooms are frequented by adults in leisure time. The daily paper, weekly and monthly magazines, and a great variety of books are the means adults provide at their own homes for spending their few minutes or many hours of leisure.

The story is presented in this chapter as a special way for children to spend leisure, by reason of its wholesome influence and of its ready availability. There is no implication here that other forms of leisure are not wholesome or that the story is always so. It may, however, be said that the story is more readily subjected to criticism and censure and thus stories of an unwholesome nature are the more likely to be rejected by the public. In the course of time such sifting of the story materials should lead to a literature of a higher type. Just this, of course, is ever taking place. It must be recognized, however, that much of that recently written seems not to have profited by the adverse criticisms of earlier writings. Thus, in spite of the fact that the permanent form of the printed story makes possible a severer criticism than may be given to games and theatricals, harmful literature does reach the leisure reader, both young and old. Yet the story within easy reach is unquestionably more wholesome than harmful; and in these good stories we have the accumulation of the best thoughts of the ages.

Marked advances in publishing and keen competition in extensive sales place the best of stories within easy reach of all. Even the best of stories are inexpensive. The theater may be attended only at set times when it is arranged to accommodate many. Most games and social activities as means of spending leisure require groups of people. But the story within the reach of all may be enjoyed by an individual reader in his own leisure time. It has also to its credit the social opportunities of the game and the theater. The group in leisure may enjoy the story as well as the individual. Thus by reason of its wholesome influence and its availability the story is presented as the most commendable means for spending leisure time.

Music, poetry, pictures. The story printed in prose is the most frequent form in which it appears. But the theater referred to in the preceding paragraph is in a real sense the place where the story is presented in dramatic form. In the lower schools many stories may be dramatized though the pupils are not yet able to read them. In a yet more frequent way children listen to stories as they are told to them. Thus the story is presented in various forms. Music is one of these forms. The song is a story told in musical form. And there are "songs without words." Music merits a place in our public schools as a wholesome means of spending leisure. At the University Elementary School provision is made for piano lessons. Pupils from all grades, even the first, are given an opportunity to learn to play the piano as a part of their own school program. And a surprisingly large number avail themselves of this opportunity. Provision should be made for lessons upon other instruments. Pictures are stories told in yet another way. The picture book is the child's first story book. The picture is too early set aside as the child grows older. Memory gems have had a place in the traditional school for many years. Attention

is given them as a part of the opening exercises, or at the close of school, or perhaps to fill up time when the school routine gets ahead of the schedule. But such memory gems are for most pupils empty words, not beautiful stories. Poetry is a story beautifully told in rather special form. It merits a larger place in the leisure time of children as well as of adults.

The problem for the schools. In compliance with Principle One [1] the schools are under obligation to make provisions for the immediate needs of children for the enjoyment of stories, including music, pictures, and poetry. If the story is rated as more wholesome than much of the idleness or other forms in which children's leisure is spent, an effort must be made to lead children into the habit of resorting to the story more generally than to other less helpful forms of spending spare time. This means that definite provision must be made that leisure be spent in the enjoyment of stories. Children, as pupils, must recognize this period as quite distinct from working periods. The stories selected and the method of treatment must be such as, in the main, render immediate and genuine satisfaction to the pupils. This immediate satisfaction is of primary importance. Quite secondary to this, but not to be overlooked, is the problem of leading these pupils into habits of reading and developing in them tastes for literature of a wholesome character. Society may rightly make such a demand of the school. But the school can easily meet that demand, for children readily develop habits when their activities are enjoyably and energetically carried on. Thus, to meet children's later needs in using the story in leisure time, the pupils must be led to read freely of literature suited to their development and for the same purpose as later, namely, immediate pleasure.

[1] Discussed in Chapter Eight.

INADEQUACY OF "READING" IN THE SCHOOLS

Little time as leisure. In his study of the distribution of time among the various studies and grades of fifty representative cities in the United States, Holmes[1] shows the percentage of total time given to " reading " in the eight grades as follows:

I	II	III	IV	V	VI	VII	VIII
30.6	26.1	20.8	15.8	13.1	12.1	10.	9.6

Thus over one fourth of the time of first grade pupils is given over to " reading," while less than one tenth of the time of the eighth grade is allowed for the same subject. The average for the eight grades is 17.3 per cent. This is a small share of school time for leisure, especially when the schedule makes little provision for other leisure except the recess periods, usually undirected. Other reports, however, show the average time for " reading " somewhat higher: Payne (1904) 20.7, Elson and Bachman (1910) 23.74, Holmes (1915) in a table other than that just referred to, 26.3.

For leisure reading 26.3 per cent or even 17.3 per cent of the school day might be quite adequate. But it is quite evident that " reading " in the public schools is not a means of spending leisure time. This " reading " is primarily *work;* it is an exercise in acquiring ability to read. Directions issued from the office of the New York State Commissioner of Education to the elementary teachers of that state may be accepted as representative. " In teaching reading in the primary grades the leading purpose is to secure the mastery of words. The first step in learning to read is to be able to recognize words at sight and at the same time to get the ideas which such words represent. . . . There should be much drill to secure distinct articulation, correct

[1] Fourteenth Year Book of National Society for the Study of Education, 1915.

pronunciation, and an agreeable tone of voice." [1] In the fourth grade emphasis seems to be given to the "proper study of the lesson," with especial reference to (1) statement of what the lesson contains, (2) meaning of new words, (3) drill on pronunciations of different words, (4) oral reading. Throughout this syllabus much emphasis is placed upon the study of phonics. Even the teacher's reading to pupils is not without some attention to work. For example, "This reading may be used as a basis for language work." Memorizing choice selections is not a part of literature to be enjoyed, but is made a part of language work. It must be said that in some schools much of the "reading" is made positively pleasurable to the pupils, just as some geography and some arithmetic are made pleasurable. Yet on the whole, the 30 per cent of time in the first grade is largely devoted to acquiring the tools for reading, and in the upper grades the 10 per cent scheduled for reading is a very small amount for leisure even if the "reading" of these upper grades were not largely characterized by work.

Meager material used. There is in recent years a very marked increase in the amount of reading done by pupils in the public schools. On the other hand, it must be said that the amount as yet being read is very small. Two, three, or four readers in the first grade are the limits in most schools. A standard reader is used as a text in each of the other grades through the sixth and in some schools in the seventh and eighth grades. One, two, or three sets of supplementary readers represent the amount read. Some schools have libraries, but these schools are too few and the library books too limited.

Moreover, leisure reading out of school is further limited by the home lessons assigned. Pupils are not through with their school day when school is closed. They are expected

[1] *Syllabus for Elementary Schools*, 1910, pages 5–6.

to " study " at home. Comparatively little encouragement or provision is made for leisure reading after school hours. In theory the school is intended to help children live better at home and in the community. In practice this is carried out by keeping children busy at lessons. Fortunately many children do have leisure books to read; perhaps also fortunately many of these books are given precedence over the lessons assigned. But this good fortune for the children is not to be credited to the school.

Lack of suitable motive. Stretched out under a shade tree or comfortably seated near the fireplace, a boy or girl reads his book leisurely but with active interest prompted by the genuine satisfaction that the story supplies. " Reading " in school offers no such motive. Pupils read largely as an assigned task. Recognition of words, phonics, enunciation and pronunciation, inflection and tone of voice, reproduction of story — these are exercises by which most boys and girls are not attracted. Further, to read before the class from a story in the text with which all are acquainted is not of interest to pupils. The supplementary reader in which sight work may be allowed is but little improvement in motivation. True, some pupils exhibit great interest in reading aloud before the teacher and pupils to gain their commendation, and some pupils appear interested in recitation upon the interpretation of the reading lesson. However, it seems quite clear that such interest is an artificial school interest rather than a normal life interest. In real life the reading of stories in leisure time is prompted by a genuine interest in the story; silent reading to satisfy self; reading aloud to please others.

STORY MATERIALS

The basis of selection. On what basis may books and stories be selected for young people to read? If we allowed

children to select their own, only a few would select well. Having found one interesting book, others of that same kind would be chosen and the richness of books of another type would be lost. Most parents are not acquainted with enough books to select wisely, though many do so most creditably. Book companies offer the best suggestions they have, but their books are limited to their own publications. The bookstore has many suggestions, but commercialism makes its legitimate limitation. The public library has recently undertaken the serious task of selecting books that may appeal and yet be wholesome. Through the story-teller's hour with groups of children much is being accomplished, but the opportunity is limited to the volunteer child and to him, too, at infrequent times. Many, if not most, school superintendents are as yet quite obliged by circumstances to make compromises in selecting materials for reading in their schools. They are thus seriously handicapped. Various studies of current practices have been made in the use of literature in the grades. Here it is assumed that " the consensus of experience in the country, as shown by a full tabulation of courses of study, is the surest authority as to the rightful position in the elementary school of any particular literary selection." [1] The trial-and-error experimentation that is going on throughout the country is good so far as it goes but it has serious limitations. The consensus of experience may be a safe guide as to the best place in the grades for a given selection of literature, but no contribution is thus made to the selection before placement becomes a problem.

In accordance with Principle One [2] two bases for the selection of story material are here proposed. First, the character and scope of the literature selected must satisfy

[1] Bobbitt, J. F., *Elementary School Journal*, Vol. 14, page 158, 1913.
[2] See Chapter Eight.

the varied interests of the children. This does not mean that the teacher should simply cater to the whims of pupils, individually or collectively. In the outside reading of four hundred high school students at Decatur, Illinois, four hundred and eighteen different titles appear.[1] The most popular book, read by seventeen students, was *Eyes of the World.* Very significant is the array of authors not found in the list of books read, or those read but very little: Hawthorne, Scott, Kipling, Cooper, Barrie, Kingsley, Stevenson, and George Eliot. It is probably not safe to leave to pupils the choice of their reading; yet their interests must be satisfied. The truth seems to be that children and youth may be easily guided in their reading interests. They need suggestions. They need stories opened to them by the teacher's reading. But children will readily find genuine interest in a great variety of types of literature if they are only made acquainted with that variety of readings. Thus while children may naturally be interested in one type of story, their latent interests will quickly respond to a larger acquaintance. To give the pupils this larger acquaintance is the duty of teachers. A classification of books is suggested below for this purpose, with the expectation that children's interests will be satisfied and also considerably widened and enriched.

A second basis for selection is, that in anticipation of later life pupils should develop the habit of making intelligent selection from a variety of books available. Children soon become youths and adults, and are then without guidance by teachers. It is too generally the habit of these older people to read narrowly under guidance of narrow interests. The efficient citizen must be well informed. It is contended in this volume that the traditional school curriculum provides

[1] Engleman, J. O., "Outside Reading." *The English Journal,* Vol. 6, pages 20–27.

little information. The young citizen acquires his acquaintance with the world by experience and reading after his school days. The observational studies outlined in Chapter Seventeen supply much information, but even this is insufficient. Much of the information that contributes to the success of a man is acquired incidentally, and that largely through leisure reading. There is great need for more of this. Books on science, invention, travel, history, and others portraying a wide range of human experience contribute to the making of the well-informed man. The school has the opportunity and therefore the responsibility of developing in children the tastes and habits for this wider reading.

Taking into account the present interests of pupils and their intelligent selection of books later, an effort has been made to map out leisure readings for the eight grades. Leisure reading is the object. These readings must not be intentionally correlated with various studies in the school. Contribution to other studies will be inevitable, but this must be strictly incidental. Any other course would deprive this reading of its leisure nature.

In the lower grades. In the first grade and to quite an extent in the second grade the enjoyment of stories cannot be limited to those read by the pupils themselves. Stories can be told, dramatized, or pictured. In this way the scope of materials suitable for children of this age can be much greater than if limited to actual reading on their part. But whether told, dramatized, pictured, or read, the nature of stories that appeal to children in the lower grades is common to all. This is *playful activity.* Much action is presented in all the Mother Goose rhymes, and there are few of these that lack this happy vein. Pupils in the primary grades are not yet fully out of the nursery stage of story. It is largely upon this same basis that the fairy tale appeals

so strongly to these pupils. Similarly nature stories bring to the children representations of the joyous activities in plant and animal life. It is by reason of the active rather than the reflective response made by children that stories of that character are wanted.

Stories that strongly appeal to these little people are thoroughly intermingled with nature that is true to life, and nature so personified as to be ridiculously false to life; with fairy tales that afford amusement because so impossible and true stories of more serious import; with fables that carry a moral and stories that depict the true and beautiful in nature to influence the behavior of children. So various in character is this interesting material read by pupils in the primary grades that any attempt to classify these stories would be quite impracticable.[1]

Books in the upper grades. In the upper grades, in which even the fourth grade might at times be included, a somewhat ill-defined but definitely purposeful classification of books is proposed. In the lower grades pupils flit about like butterflies: now here, then suddenly there. They find delight in a great variety of stories. As these pupils develop, they rapidly acquire rather definite tastes. If let alone, they read book after book of the same type. Girls may become infatuated with fairy tales or romantic stories, and then they read nothing else. Boys may become engrossed with historical legends or accounts of heroic adventure, and then they read nothing else. But these young people would develop interest in a variety of stories if a wider acquaintance with stories were encouraged and made possible. A very important purpose in directing elementary reading is to lead the pupil to realize fully that there is other literature than the type into which one's interest has prematurely fallen. A classification is made for this purpose.

[1] See Appendix A, for such books.

By such a classification pupils readily see the varieties of reading possible for them.

No classification of such material could be mutually exclusive. There is no definite line of demarcation separating these groups, and most classifications differ. The following is submitted:[1]

1. Fables, fairy tales, myths, legends, wonder stories.
2. Travel, including sightseeing, exploration, adventure, scenery, manners, and customs.
3. Nature.
4. Industries, invention, science.
5. History and biography.
6. Character study — fiction.
7. Humor.

On the basis of this classification, or any other, as a means by which pupils will be enabled to recognize various types of story material and will thus be led to find interest in more than one type, important problems arise. What distinctions in purpose and method of reading these types may be made that the reading may be more enjoyable and more valuable? Or, indeed, may any distinction as to purpose be made, when all this literature is read in leisure time? What other purpose has the reader in leisure than to pass the time in a pleasant way?

The reader is reminded that the position taken throughout this volume is that in giving instruction to pupils in elementary schools attention should be placed primarily upon meeting present needs, only secondarily upon preparing to meet needs as they arise later. The immediate purpose

[1] A recent report of the St. Louis Public Library gives the following classes of books for juvenile reading at home. General works, Philosophy, Religion, Sociology, Fairy tales, Philology, Natural science, Useful arts, Fine arts, Poetry, Fiction, Literature, History, Travel, Biography, Little children's fiction, Little children's non-fiction.

of the boy who takes up a book to read for an hour of leisure is to have a good time. If, however, he has an opportunity to select his book from among others, he has thought out some distinctions between these books, as a reason for selecting one rather than another. Moreover, immediate satisfaction in reading — by way of spending leisure time — is considerably affected by what the reader feels will be of value to him at the close of his reading, or some time later. There is a real difference in the feelings of satisfaction while playing games and while enjoying leisure reading. In play the child is essentially unmindful of the pleasure he is getting. In leisure reading he is somewhat conscious of enjoying the events as presented in the story, and that enjoyment is increased as he takes note of how he might use this story later. For example, he might tell the story to others for their entertainment; he might find more satisfaction for himself in his observations in nature or in his talks with people. But his own immediate satisfaction while engaged in this leisure reading is the primary purpose. The secondary purpose, that of making use of this leisure reading in some activity later, cannot be overlooked.

If we recognize different types of reading material, such as travel, nature, and character study, and if in this leisure reading pupils are at all conscious of purposes other than merely passing the time, we may reasonably expect that in reading the various types of literature we may have correspondingly different purposes. That is, in reading a book on travel a boy will have a purpose different from that when he reads a book on nature. Moreover, with stories quite different in character, and different in the purpose in the mind of the reader, we may well expect a difference in methods of reading. This *manner* of reading a story due to the purpose in the mind of the reader and due also to the nature of the story becomes a problem for the teacher.

With no intention of making any satisfactory analysis of these various types of readings, brief suggestions are here offered indicating possible differences in special purposes and methods.

1. *Fairy tales, myths, legends, fables,* etc. Here the special purpose is that of enjoying the flights of imagination of the author, with the probable expectation of telling the story to others later, or of supplementing one's later enjoyment by recalling these flights of imagination. Further, only a little reading of this type will lead the reader to take such flights of imagination for himself. This greatly increases his pleasure in such readings. And in just this is suggested a manner of reading fairy tales and others of this group. The reader may supplement the author's work by inventing some experience similar to that being read. Too little opportunity and encouragement are given in public schools to read constructively. Merely to receive impressions while reading is not to read much. The effective reader must react; that is, he must take a positive attitude toward what he reads. In this type of imaginative story his reaction will be making fanciful creations of his own. In reading "Jack and the Bean Stalk" it would clearly be inappropriate to consider the actual growth of a lima bean. But to supplement this story by a flight of fancy about Jack in the Pulpit, or Tam and the Pumpkin Seed would be quite in place.

2. *Travel, adventure, scenery.* Here the more remote purpose of the reader may well be to acquire more sympathetic appreciation of peoples and their environments in other places. Most young people know too little of other peoples and places, and are too little concerned about them. This means that life is too much limited to self. This is unsocial. The community suffers thereby as well as the individual. A wider and more generous outlook is needed, for both present satisfaction and later development. Thus in stories

of this type the young reader may advisably supplement his new acquaintance with "Martha in Holland" by comparing certain dress customs or industrial activities of the Dutch with corresponding ones in other countries with which the reader may be acquainted. Thus the reading of literature in this group calls for reaction in the form of comparisons and evaluations.

3. *Nature.* All children and adults are observers, more or less, of nature that is about them. The extent of such observing and the satisfaction in it are increased when the observer becomes better informed through instruction or through reading. The more remote purpose in reading nature stories is thus to supplement observations already made and inspire to more satisfactory contact with nature. The boy or girl who reads literature of this type has, in the course of his normal experience, become somewhat acquainted with the plant and animal world about him. On the basis of this experience, then, he would naturally react in reading what others have reported about nature. Thus in reading *Short Stories of Our Shy Neighbors* the pupil should be encouraged to report freely on similar readings or on his experience with the shy little animals he has observed.

4. *Industries, invention, science.* Leisure reading in this group must be distinguished from the *study* of industrial activities. It is indeed quite probable that comparatively little reading of this type is done for leisure. A boy reads *Stories of Useful Inventions* for suggestions or guidance in a bit of his own constructive efforts. Such reading is thus probably *work* for him. His primary purpose is preparation for an undertaking, not the satisfactory occupation of leisure time. On the other hand, a boy may read *Triumphs of Science* primarily as leisure but with the more remote object of better understanding and appreciating the industrial activities taking place, though he is not directly engaged

in them. It has been pointed out earlier that the socially efficient citizen is usually the one who is first of all somewhat acquainted with the productive activities of the immediate and the larger community. Such a youth or adult is usually more considerate of public needs and public service. In reading literature of this group thoughtful comparison is probably an effective means of improving the reading. And this is applicable whether the reading is in the group at school or as individuals at home. In directing reading of this sort in school or advising on the method of reading at home one precaution is needed: Care must be taken not to make the comparisons so studied that the young reader is put to work rather than enabled to enjoy his leisure by a more thought-reacting method of reading.

5. *History and biography.* The treatment of history and biography is in most schools of the character of work. But there are some pupils and some parents who use historical material as leisure reading. More pupils would do so were not so much emphasis placed, in the public schools, upon historical sequence. Aside from the purpose common in all these types of readings for leisure time, the purpose in reading historical material seems to be to secure a certain satisfaction of a critical nature, or a certain intellectual pleasure in the knowledge of men and events in earlier times. There is probably much of the conventional in our attention to history. The feeling is widespread that education is scarcely possible without a knowledge of the Greeks and the Romans. Many people are more concerned about what others think of their knowledge of history than about any satisfaction an acquaintance with earlier times and peoples actually affords.[1] It is this feeling of satisfaction that provides purpose in reading history in leisure time. But

[1] Compare Spencer's criticism of conventional education in his essay on "What Knowledge Is of Most Worth."

when a boy reads *Washington and His Generals* his reaction is usually by way of comparisons with other generals and especially with army officials or movements of the present. *Heroes Every Child Should Know* is the more enjoyed if present-day heroes — even local heroes — with whom the reader may be acquainted are compared. History, as a record of events, has real significance to the leisure reader, as well as to the student at work, only as some reflection of a comparative nature is indulged in.

6. *Fiction — character study.* Even children of elementary school age entertain many very thoughtful views of life. Children early in life judge the character and actions of others. They judge right and wrong. They discriminate between the good and the bad. Fiction that is suitable for boys and girls is more than a mere plot, a story with a beginning and ending. It is a study of character. Not all fiction is wholesome for children. But wholesome or not, fiction portrays life after much the same fashion as observed by boys and girls. Here again, in the normal lives of children is found a method of reading literature of the character-study type. It may well be expected, therefore, that in this kind of reading questions of worth, of ethical values, may be continually raised, whether in the schoolroom group or as individuals at home.

7. *Humor.* Too little time and attention is allowed in school for intellectual fun. The humorous is largely debarred in the serious traditional school. But with approximately one fourth of the school day scheduled for leisure through the story, some time could and should be given to humorous readings. As in the other types of reading there is here also a purpose more remote than immediate fun. Fun of the right sort brightens the disposition and also provides one with the means of giving to others later some of this same geniality and pleasantry. It would be quite

out of place to have readings of this type regularly each day for some time, as with other types of reading. Irregular times determined by circumstances are preferable. And in this reading fun must be met by fun. Any form of analysis or study would be foreign to the nature of the material read. " ' Just for fun ' is the first reason for the humorous story; the wisdom in the fun is the second." [1]

Books chosen by pupils. In most elementary schools library facilities have been so limited that pupils have little opportunity to select their own books for reading. A large number of books should be within reach of pupils if their reading habits and their tastes for good reading are to be well developed. But pupils need guidance in the selection of their books. At the University Elementary School for the past six years the pupils have had a library of about twenty-five hundred volumes, with but few duplicates. This library includes about six hundred books, unclassified but suitable for pupils within the first three grades; also books for the intermediate and upper grades, which are classified according to the seven types outlined above, although most of the books of industry, invention, and science are used for the study of industrial activity rather than for enjoyment of leisure time. In the selection of their books the pupils above the third grade have been directed to read at least one book each year from each of the first six types given above. The particular book is largely their own choice. Inasmuch as each pupil in Grades IV to VII in the past three years has read on an average twenty-one books each year, more than two thirds of the reading is wholly elective. It has been assumed, however, that the pupils are influenced in their selections by the class readings and the direction to read at least one book from each of the types.

[1] Bryant, S. C., *How to Tell Stories to Children*, page 20.

Table XVII and Table XVIII [1] record a portion of the books read at the University Elementary School during the three years 1914–1917.[2] Table XVII includes the books read by ten or more pupils. In this list are 169 books. Table XVIII includes those books read by five, six, seven, eight, or nine pupils. In this list there are 155 books. Seven hundred five other books were read by only one, two, three, or four pupils.[3] Table XVII may be read as follows: *Adventures of a Brownie* was read by one pupil in Grade II, eleven in Grade III, five in Grade IV, two in Grades V and VI, and two in Grade VII. This book is one of nine ranking the fifteenth in this list of 169 books. Table XVIII should be read likewise, but it must be noted that the rankings are in relation to the books listed in Table XVII.

Two matters of interest are readily noticeable. First, there is a great range of books read. These two lists of 324 books are increased by 705 other books not here reported. This is in marked contrast with the "reading" scheduled in the traditional school. One explanation for this wide range of reading seems to be that these pupils talk freely among themselves of the books they read. After hearing of a book in this way, pupils prefer to read a strictly new one. There is a real advantage in this: an individual pupil's own reading is not lessened, and he profits by the reading of others. Second, books are read by pupils of various grades. Comparatively few books are limited to a range of two grades; many are read in five or even six different grades. Explanation for this is in the fact that this material for leisure reading is not organized on the basis of technical difficulties in reading. Emphasis is placed upon the enjoyment of the story. That

[1] See pages 468–478.

[2] In each of these years the school enrolled about one hundred pupils.

[3] This means that 1029 different books were read during these three years. The school library at that time contained about 2000 volumes.

this wide range in reading produces good readers, oral as well as silent, is not questioned by those who observe the work in progress.

This wide range of leisure reading books read suggests the wisdom of avoiding the selection of particular books for particular grades. Pupils who read an average of twenty-five books in each of the first three grades [1] acquire an ability to read without difficulty any book of interest to them. Teachers who may select books from the two lists given are therefore advised to select in part at least books read more by pupils above or below the grade in question than by pupils in the given grade. For example, in selecting for the third grade, *Book of Nature Myths* may be safely chosen. This book ranks eighth in the first list. This rank recommends the book, though it is read more by pupils in Grades IV and V than by pupils in Grades II and III.

PLAN FOR CONDUCTING THE STORY HOUR

Report of experience. The story hour presented in this chapter as a period of leisure is probably unique at the University Elementary School. The story is presented as one of the very best means of occupying leisure time. Reading materials should be quite extensive and readily available to the pupils; free selection under helpful guidance is important. These are two of the more important conclusions from the experience of this school. A report on certain details of conducting this story hour may be suggestive.

Learning to read excluded. The initial step in learning to read does not belong to the story hour. Pupils are here concerned with the enjoyment of stories, not with the mechanical process in learning how to read. In the traditional school the " reading " class assumes the responsibility

[1] See Table IX, page 363.

of teaching pupils to read. No effort is usually made in language classes, or in arithmetic, history, etc., to teach pupils to read. How to read is the specific problem in the reading classes. And this is almost universally the case even in the use of texts in which the author clearly states in the preface, " The object is the story." But the position taken in this volume is that the formal subjects should be taught only as the subject matter of such subjects actually functions in other work of the pupils. Thus it may be expected that pupils *will learn to read* while engaged in the enjoyment of stories, but learning to read is not at all the purpose. Ability to read is only a by-product of enjoying the story.[1]

Time schedule. In the traditional school primary reading classes are quite generally scheduled to recite four times each day. This frequency, compared with that for other activities, is probably an indication of the relative importance assigned to the exercise in learning to read. But even with that frequency only about twenty-five or thirty per cent of the school day is given to reading. This means that with from one hour to one and one half hours each day each reading period continues only fifteen to twenty-five minutes. This is insufficient time for the enjoyment of stories. A period of one full hour is not too long a period for leisure with the story. A fourth of that time is fatiguing for the pupils in the traditional reading periods. It is probable that both teacher and pupils prefer a regular time for this leisure reading each day, though they should be at full liberty to change the hour at will. Some days the weather may call for another hour for the story; sometimes the nature of other school activities makes a change advisable. At the University Elementary School the story hour is from

[1] It should be said that pupils in the University Elementary School *learn to read* as much or more in their studies of observation and play as at this leisure reading hour.

1.30 to 2.30. This hour extends to 3 to include singing and the enjoyment of pictures. Little less than one fourth of the school day is devoted to the enjoyment of stories, singing, and pictures; little less than one fifth to stories alone; and this in one period. Moreover, it is approximately the same for all grades. Early in this chapter it was noted that in the traditional schools more than one fourth (30.6 per cent) of the time in the first grade is scheduled for reading. The amount of this time regularly decreases in each grade to the eighth, which is scheduled to have only 9.6 per cent.

Silent and oral reading. Most of the reading in real life is in silence, not aloud. Reading is *by* the public, not *to* the public. School men are taking this more and more into account and there is a positive tendency to give more attention to helping pupils to become good silent readers than to developing them into good oral readers. This need not mean less class work of an oral character, but it does call for another type of class reading. The deaf are taught in silence, but at a great handicap. Teaching silent reading is best done through oral instruction, but emphasis must not be given to inflections, pauses, tone values, etc. Attention must be centered upon the story itself. Indeed, this will probably result in better oral reading than the traditional drill upon one selection. It must be said, however, that the silent reader acquires efficiency by reading silently. The large amount of reading by the pupils in the University Elementary School could not have been done orally. Most of it has been done silently.[1]

The circle and small groups. Silent reading requires no audience. Oral reading has no purpose without the audience. The arrangement of pupils in long rows in the traditional school robs the reader of his audience, or at least the audience

[1] Compare statistical studies by Kelly in Monroe's *Educational Tests and Measurements*, pages 66–111.

is reduced to the teacher who usually stands in front, and the backs of the heads of the pupils in front of the pupil reading. This situation is sufficient to explain all the poor reading so generally found in the traditional reading classes. Without a real audience the pupil has no motive for good oral reading. The practice of some schools in having the reader come forward and face the school relieves the situation, except for the textbook discussed in the next paragraph. In place of the rows of school desks, the chairs used by pupils may be arranged in circular form. But even with the traditional rows of seats pupils may be arranged in circular form sufficiently well to enable most of them to face other pupils. In this arrangement there is no occasion to rise when reading. Such standing is usually formal and artificial. In this circular form each pupil is a participant as well as the one who reads: he is in a position to listen with his eyes as well as with his ears and can readily join discussion as the story presented offers opportunity.

The class may be broken up into small groups from time to time and continue so for a few days. These small groups should be composed of those who are socially congenial. These groups may be scattered about the schoolroom or out in the halls or other places in the school building. The teacher cannot, of course, be with all groups at once; but she can act as supervisor and go about from group to group as she feels there is need. These small groups lessen the size of the audience, but increase the opportunity for oral reading and for discussion. The superficial observer will complain of lack of order, but he does not see the real reading taking place.

The text and the library. When the class is reading from one text so that all are expected to be familiar with the story to be read, there can be no motive for the reader to read well, or for the others of the class to listen well. The text is wholly out of place for the enjoyment of the story; it is a great

handicap even in learning the mechanics of reading. In place of the text studied by the pupils before coming to class, two plans may be used: (1) One book may be passed about or used wholly by one pupil. In this case the reading would usually be " sight " work. But most of the reading above the first grade may well be " sight " work. (2) Each pupil may bring to the class the book which he is at that time reading. As opportunity offers the pupil may select a story or a portion of one which he has previously read and present this to the circle or the smaller group. His motive is to entertain the others with that in which he has found entertainment. Thus both reader and listener have good motives for the parts they play. The pupil need not read all his story or indeed consecutive parts. He may make selections and tell of parts omitted. It must not be expected that all that is read will be presented in class. This would be impossible, as seen from the amounts of reading done by pupils reported at the close of this chapter.

Procedure in the lower grades. The story hour may be spent wholly in silent reading or wholly in class work. In the lower grades it is best for most teachers to provide for both silent and oral reading within the hour. Care must be taken not to let the striking of the clock determine regularly when one must stop and the other begin. Variation according to circumstances is preferable. Silent reading in the lower grades is best conducted by having the pupils irregularly distributed in small groups, largely on the basis of congeniality but so far as convenient with one of the stronger pupils in each group. " Silent " reading with little people is often somewhat noisy. Objection must not be made to this. The children are active and their audible silent reading is effective. This method of reading calls for the telling of words by a stronger pupil or by the teacher. But when twenty, thirty, forty, or even fifty pupils are read-

ing in this way, it must be recognized that a great deal of reading is being done.

When the " silent " reading is exchanged for the oral class work, the circle arrangement is preferable to the small group, though the small group system may be profitably used at times. When seated in the circle, the reader may be selected by the teacher, or suggested by one or more members of the class, or he may volunteer and gain the privilege of reading by insisting that he has a good story and can present it well. He may tell portions or read it all. Within the first two years of school seldom will a story be presented as " sight " work. The reader must present what he believes will entertain the others. Unfamiliar words must be told by the teacher or other pupil. Surely not all pupils will read to the class each day. A week or more may elapse before some pupils have the opportunity. But in the meantime they are reading much in silence. The reading of the story may often be interrupted by questions, comments, illustrations, and dramatization. But such interruptions are only means of better enjoying the story.

Procedure in the upper grades. In the upper grades provision should be made for full hour periods of silent reading. And this should be strictly silent reading. Seated about the room, the library, or halls, the individual rather than the group can spend a pleasant and profitable hour. The dictionary as well as the stronger pupil or the teacher should aid in difficult places. But the context itself is one of the best aids. It must be expected, too, that much more of this silent reading will be done at home than is done by pupils in the lower grades. Indeed, this leisure reading should be the chief " home work " for pupils.

Oral reading in the class may well continue for the full hour subject to variation as suggested a few pages earlier. This oral reading *may* be selections from the silent reading already

done. But it must be assumed that pupils in the fourth grade and above are able to read quite efficiently at sight such literature as is readily understood by them. The class work may, therefore, be material quite new to all. On page 348 seven types of readings were presented. Experience has shown the advantage of using a book representing one of these types for about two weeks, more or less, according to the time needed for the book chosen. This book is read in class but not by individuals outside of class. While this book is being read in class each pupil reads outside of class at least one other book of that type. He may read more, or choose from another type. During the reading in class, the pupils frequently interrupt with questions or comments suggested by the reading of a similar book outside of class. In this way the story hour is primarily for the immediate enjoyment of the pupils, but pupils also require an acquaintance with methods of reading literature of that type. Class work has thus a very direct effect upon reading outside of class.

Spare time. Leisure reading is not limited to the story hour. Pupils are free to go to the library when they wish. They do find leisure time at irregular intervals. Their other work is never fully completed but frequently there are intervals when it is better to read leisurely than to begin a new piece of work.

Book reports. It is not important that a close account be kept of all the work of pupils, nor should they be examined to ascertain how carefully they read in their leisure time. Book reports are kept at the University Elementary School as a record of the reading done. In the first two grades the pupil draws a picture to represent some portion of the story, or book, read. In Grades III and IV a drawing is supplemented by very short statements written beneath the drawing or on a separate page. In the grades above the fourth a

paragraph or a page is written. This practice may be questioned as an infringement upon leisure time for which this reading is intended.

RESULTS

Amount of reading. It is impossible to secure a record of all the reading done by pupils. They read much at home and some at school which cannot be recorded. Report is here made of the reading at the University Elementary School for the three years from September 15, 1914, to June 1, 1917, but with no account of reading done during the summer sessions of this school, nor much of reading done by many pupils at home. This report includes only books taken from the school library and definitely recorded. Table IX shows the extent of this reading. The amount of reading is here expressed in book units. This is, of course, not very definite. Books vary in size. But this unit is sufficiently definite for the present purpose. By referring to books listed in Tables XVII and XVIII [1] a somewhat more definite notion may be had of the amount of this reading.

TABLE IX

SHOWING MINIMUM, MEDIAN, AND MAXIMUM NUMBER OF BOOKS READ BY PUPILS IN THREE YEARS, 1914–1917

GRADES	1914–1915			1915–1916			1916–1917		
	Min.	Med.	Max.	Min.	Med.	Max.	Min.	Med.	Max.
I . . .	5	11	18	6	14	24	8	16	45
II . .	8	17	27	18	30	39	16	33	39
III . .	7	16	40	13	26	56	28	54	62
IV . .	7	12	46	5	13	40	23	43	67
V, VI .	9	15	24	7	15	33	7	20	41
VII . .	13	18	32	11	16	32	8	18	50

[1] See pages 468–478.

It will be readily understood that books used by pupils in Grade I are small and the type large. In the upper grades the books are larger and the type smaller. Thus no comparison between the grades should be made. It may be of interest to compare the amounts given here with reading done in corresponding grades in the traditional school. It should be stated here that pupils in Grade I at the University Elementary School do not begin to read in books until December or January. Further, the amount of reading here recorded is exclusive of the great amount of reading done especially in connection with studies in observation. In the first grade two hundred books are called for by these outlines.[1] In the one topic of Transportation studied in Grades V and VI one hundred ten books are used.[2] Thus the amount of reading reported in Table IX represents only those books drawn from the school library for leisure reading, usually one hour each day in school — though much of this hour is occupied in class reading — and such home reading as is done, more than two thirds of which is strictly voluntary.

Immediate pleasure. It is impossible to ascertain at all accurately how much pleasure pupils have in this leisure reading. The amount of reading, however, is significant, as a large part of this reading is voluntary. The book reports, too, in which the upper grade pupils record whether or not they like the book, show the pupils' fondness for this reading. This immediate pleasure must be the chief result of this leisure reading.

By-products. This extensive reading cannot but bring to the pupils many valuable results in addition to pleasure. Pupils do learn to read. They become acquainted with letters, sounds, and various combinations, which are not so much needed in reading as later in composition. Pupils

[1] See Appendix B. [2] See Appendix C.

do learn to read aloud with excellent expression, though silent reading for the story itself is the chief object. They become good listeners, for when a story is read, only by listening can it be enjoyed. Such extensive reading provides, quite incidentally, a wealth of information which renders much service later. Moreover, so much reading of creditable — even excellent — literature develops in the pupils a habit of reading and a taste for good reading.

Supplementary Readings

ARNOLD, SARAH L. *Reading, How to Teach It.*

BOBBITT, J. F. "Literature in the Elementary Curriculum." *Elementary School Journal*, Vol. 14, pages 158–166.

—— *What the Schools Teach and Might Teach*, pages 21–34.

BOLENIUS, EMMA. *Teaching Literature in the Grammar Grades and High School.*

BRIGGS, T. H., and COFFMAN, L. D. *Reading in Public Schools.*

BRYANT, SARA. *How to Tell Stories to Children.*

CARLTON, W. N. C., JUDD, C. H., and RODEN, C. R. Children's Reading and Libraries; see *The Child in the City*, pages 373–397.

CARPENTER, G. R., BAKER, F. T., and SCOTT, F. N. *The Teaching of English in the Elementary and the Secondary School*, pages 67–121, 155–187, 250–282.

CHARTERS, W. W. *Teaching the Common Branches*, pages 104–145.

CHUBB, P. *The Teaching of English*, pages 1–88, 117–172, 235–315.

COLBY, J. R. *Literature and Life in School.*

COURTIS, S. A. *Standards in Rates of Reading*, pages 44–58. See the Fourteenth Year Book of the National Society for the Study of Education.

COX, J. H. *Literature in the Common Schools.*

FREEMAN, F. N. *The Psychology of the Common Branches*, pages 67–97.

HALIBURTON, MARGARET, and SMITH, AGNES. *Teaching Poetry in the Grades.*

HUEY, E. B. *The Psychology and Pedagogy of Reading.*

JENKINS, FRANCES. *Reading in the Primary Grades.*

KENDALL, C. N., and MIRICK, G. A. *How to Teach the Fundamental Subjects*, pages 8–60.

MONROE, W. S., DE VOSS, J. C., and KELLY, F. J. *Educational Tests and Measurements*, pages 66–111.

Statement Outline for Chapter Sixteen

Handwork is proposed as one of four subjects in the elementary school curriculum.

Various purposes are assigned to handwork in the school.

- Handwork provides general training.
- Handwork makes school work more attractive.
- Handwork contributes to a practical education.
- Handwork is a handmaid in methods of teaching.
- Handwork as normal experience is recommended in this volume.

Handwork projects are objective problems of practical significance to the pupils.

- The basis for the selection of projects is found in the constructive activities in which children normally engage.
- Organization of projects is unimportant.
- Pupils are as interested in handwork for school purposes as in projects for themselves.
- Lists of handwork projects are needed as suggestions.

The method of conducting handwork must be educational.

- Schools provide too little time for handwork.
- More attention should be given to working out designs and specifications.
- Much discussion of materials, construction, etc., is needed.
- Exhibit of all projects made is instructive.
- Material and apparatus used should be good but need not be expensive.

Handwork in school should contribute much to occupation at home.

CHAPTER SIXTEEN

School Studies — Handwork [1]

VARIOUS PURPOSES FOR HANDWORK

As general training. Inasmuch as general training is the justification for so much of the work in the traditional curriculum, it is not at all surprising that handwork should have claim to a place upon the same basis. Even as far back as 1872 the Swedish government reached the conclusion that " schools for instruction in Sloyd were necessary to restore the waning physical and moral health of the nation. . . ." Early discussions [2] of manual training in this country emphasized general discipline as its chief value. Work with tools and materials developed the powers of observation, trained the pupils to reason, and strengthened their wills. Sixteen years later this same notion was still prominent. " . . . the quickening of the creative instinct, the inculcation of a respect for labor, the formation of habits of neatness, order, directness, and exactness and the induction of the logical and rational thinking . . . " [3] are given as purposes for manual training. In his inspection of the schools of New York City in 1912, Professor McMurry found the handwork in the grades so uniform for all districts that he was obliged to judge the work conducted for " disciplinary aim and technical sequence." This purpose for handwork in many schools even today permits much formal exercise in making things.[4]

[1] This school study is given only a very limited treatment here. The work has as yet received comparatively little attention and study in the University Elementary School. Since the relation of this handwork to the curriculum is probably somewhat different from that presented in most public schools, a brief statement will be given.

[2] See Reports of National Education Association, 1888.

[3] Leavitt, F. M. (Reference has been lost, but Mr. Leavitt accepts this statement as an expression of his view fifteen or twenty years ago.)

[4] Compare the various "values" assigned by Row in *The Educational Meaning of Manual Arts and Industries.*

As an attractive element. Handwork appeals strongly to most pupils. This does not mean that all girls are interested in a certain kind of sewing and all boys interested in a certain kind of bench work. The constructive instinct is strong in most children. Through this interest an appeal is made to children to take hold of the common school subjects. In many schools manual training and various forms of handwork are given a place in the curriculum not by reason of any intrinsic value but for the purpose of attracting children and leading them to tolerate the regular work for the sake of work which they enjoy. In discussing "needed changes in manual arts," [1] a professor of manual arts advocates the use of manual training to interest pupils and keep them in school. To use manual arts in any such way casts a reflection on the other school work to which manual arts is intended to attract children and, secondly it misuses the more valuable activity as a means of securing one of less value. This purpose probably will pass soon, precisely as other devices have lost their places.

As a practical education. Manual arts as a part of the present-day curriculum is credited with providing practical education. Since objectivity is a phase of this subject it is regarded by some as a better means of developing earning capacity than other school subjects. General handwork in the public schools is credited as excellent preparation for vocational training later. Further, credit is given handwork on the ground that through it the child gains an insight into industrial processes in which so much of life is centered later.

The practical aspects of school work are destined to be given more and more prominence in our schools, but there is serious danger of expecting too much of this practical outcome from manual arts. Time possible for this work is too limited to develop much ability in pupils; indeed pupils

[1] National Education Association, 1912, pages 932–941.

in the elementary schools are too young to acquire much practical ability. There is also the danger that, in schools where the practical is an aim, handwork will be of the apprenticeship type, rather than truly educational. Handwork as a practical education is probably interpreted in terms of the adults' standard rather than in terms of the children's appreciation of it.

As a method. Two aspects of handwork used as a method may be noted: one is a means of expression used by the pupil; the other is a method of teaching employed by the instructor. It does seem in keeping with a child's nature and his ability if he expresses his idea of multiplication by an arrangement of blocks or by the cutting of paper squares; some geographical concepts by means of constructions in the sand table. It is true that many children do tend to express themselves objectively. Would not an analysis of the situation reveal as truth that such pupils have not yet sufficient control of language to express their idea? A further truth may appear also: the pupils are more concerned in the *activity* required in the construction than interested in giving expression to an idea through such construction.

Teachers employ handwork construction as a method of teaching. Some ideas are made clearer by being expressed in *some* such form. For example, the relation of sun, earth, and moon may be made clearer by a construction of rubber balls and hatpins. This illustrative method of teaching is usually employed when the topic to be taught is not normal and suitable for the pupils.

There are two serious dangers in the use of handwork as a method. One is that it will be used where there is no real need for it. For example, pupils in the traditional school are studying arithmetic. To "motivate" this, aspects of the grocery store are studied. A further step is taken by constructing in the schoolroom a miniature store.

This is made of a dry-goods box. Shelves are provided and empty cans, bottles, pasteboard boxes, etc., are placed on these shelves. The completed structure has some resemblance to the downtown grocery, but such handwork construction is not at all needed. No idea is added to what the pupils already had by constructing it. The grocery store itself would serve much better in making clear any indefiniteness. It is *probable* that motivation of the arithmetic through the grocery store is used as an opportunity for resorting to a bit of handwork activity, almost universally attractive to children.[1]

A second danger is that handwork will be devised that will lead far beyond what was intended, due to the suggestiveness of the handwork. "A child wants to make a picture book. In making it he must measure and he must divide; he should also increase his practical vocabulary; in addition to these he may learn something of the early history of books and of the source of paper and strawboard and cloth and paste; he may then collect pictures and learn something of the lives of the men who painted them, and the thoughts and feelings they desired to express through them. Thus the manual arts serve as a method or means of teaching other subjects and so contribute an element of value in the educative process."[2] Just such an omnibus is frequently made of manual arts. "The play house," which was so enthusiastically placed in the schools twenty years or more ago and which is not yet wholly extinct, enabled the ingenious teacher to put into it almost anything she wished. From that handwork exercise there were tangents to other topics almost wholly unrelated to the house that the hands had made.

[1] Compare suggestions in Charters, W. W., *Teaching the Common Branches*, pages 212–213.

[2] Bennett, C. A., "The Place of Manual Arts in Education." *Educational Review*, Vol. 42, page 248.

Such are the dangers for those who would use handwork as a method. Handwork should not be reduced to the position of serving as a handmaid to the other subjects.

As normal experience. Consistent with the purpose of elementary education — *to help boys and girls do better in all those wholesome activities in which they normally engage* — handwork may be assigned an important place in the curriculum because it is a wholesome activity in which most children normally engage. This is a sufficient justification. The other purposes, so far as they are used, must be strictly subordinate to this one. School work will be more attractive to children by the introduction of manual arts, as it always is when their normal activities are the subjects for study; if handwork may be suggestive as to method it should be introduced into the curriculum chiefly as a good example of effective laboratory study.

The difference between handwork pursued in school as a normal experience of pupils and that generally motivating school topics closely resembles the difference between the natural life of children out of school and the formality of their life activities in school. We need to beware of the feeling of obligation to *make* a place for handwork in school: for the purpose of interesting pupils, supplying means of expression, or illustrating subjects that may be difficult. Handwork has by its own nature a place in that curriculum which is based upon the natural activities of people outside of school.

HANDWORK PROJECTS

Basis of selection. Quite consistent with the "studied" purposes so generally expressed as justification for handwork in the curriculum are the very fundamental principles evolved by those who make out courses of study in handwork. Representative of such efforts is the following: ". . . there

are certain interests and activities that are more or less common in all communities. These will constitute a basis for a general suggestive outline which may be filled in and supplemented as necessary or desirable for local conditions. First, there are certain lines of early racial industrial activities that have historical as well as manual art values, and that appeal to the combined play and constructive impulses of children. In their proper time and place, and within common-sense limitations, these have educational value for all children, and hence should find a place in the course of study. For example, the making of simple textiles and pottery were among the early efforts of the man to utilize the materials of his environment. Rushes and coarse grasses were everywhere available for the simple mats, and clay could always be found for making the 'coiled' bowls or pots. In either of these processes no tools were needed. They were genuine hand-made articles."

That guiding principle leads to the selection of the following projects among others listed:

For first grade:

"2. If there is a period devoted to the study of a primitive people, for example, the North American Indian, there should be a similar correlation, such as:

(*a*) The representation of an Indian home, or better, a small village, on the sand table.
(*b*) Construction of wigwams.
(*c*) Making canoes of bark, or cardboard.
(*d*) Placing evergreen twigs to represent forest.
(*e*) Modeling in clay the figures of Indian men, women, and children engaged in typical occupations. Modeling, also, some wild animals.
(*f*) Making spears, tomahawks, bows and arrows, hunting knives of stone, a stone corn mill, etc.

3. Representation of some typical industry, such as the production of bread.

(*a*) Making primitive spades, or a plow, and harrow.
(*b*) A wooden reaping sickle, or a scythe.
(*c*) A flail.
(*d*) A sieve.
(*e*) A mortar or stone mill.
(*f*) A baking stone."

For second grade:

"1. The historical work should center about the life in the pastoral and early agricultural periods, somewhat as follows:

(*a*) The story of how men came to domesticate animals. Why sheep and goats were among the first domesticated.
(*b*) Examination of part or the whole of a fleece.
(*c*) Experiments in primitive processes of washing, combing, dyeing, and spinning wool.
(*d*) Designing and weaving a blanket for a doll's bed.
(*e*) Children construct their own simple wooden hand looms."

For third grade:

"On the historical side, projects may center about the beginning of commerce and transportation.

1. The pupils convert a large box into a store, put in a counter and a few shelves and samples of staple goods, or boxes labeled to represent the goods. They construct balances to weigh articles, and rules with which to measure."[1]

Further citations are unnecessary to show how these "studied" uses for manual arts lead far beyond handwork itself. In this case much history is included, which is questionable subject matter for teacher and pupils of these lower grades. In all similar cases handwork becomes too involved; it is made quite other than the normal activity of children; it includes studies in which the adult sees possibilities for correlation.

Quite in contrast to such a basis for selecting handwork projects, the normal needs, interests, and abilities of pupils

[1] These quotations are from R. K. Row, *The Educational Meaning of Manual Arts and Industries*, pages 216–220.

greatly simplify the problem and make the work more effective. This basis, of course, means that the projects are not selected in relation to other subjects, as illustrative means, nor upon the principle of making simple things in imitation of simple primitive life. The basis for selection of handwork projects is best found in those wholesome constructive activities in which children normally engage. These projects cannot be mapped out in a definite course but must depend upon circumstances.

Organization of projects. The little organization possible at first appears to be a real weakness. In reality it is a source of strength. Accept the notion that pupils have in mind (or would readily have with a little help) many things they would like to make to meet certain needs or mere wishes, and believe that the school is under obligation to help these little people do better in these wholesome activities; then close organization of their projects is undesirable, but some arrangement for work is imperative.

An arrangement is here suggested. In the outlines for Grades I and II, in the following chapter, it will be seen that handwork is organized in terms of the materials used. For example: yarns for weaving in one month; cross-stitch canvas in another; denim, canvas, linen, in another, etc. The basis for this organization is largely that of convenience for the teacher and her pupils. She can more easily provide materials of one kind. The children's own interests are not sacrificed. They are glad to be thus guided. Among the older pupils the organization is largely determined by school management in conjunction with pupils' interests. Such groups as the following may be made: cord, yarn, rags; paper, cardboard; reed, raffia, tissue-paper rope; food; wood; textiles; metal.

In this work it is not at all important that pupils be grouped according to the usual grades. Fourth-grade girls

may work with the same materials used by pupils in the seventh grade. A similar statement may be made of the boys in their work. It seems that these different forms of handwork should not be wholly elective, and that most pupils should in the course of a year or two have taken some handwork in each of these groups. Much individual attention is necessitated by arrangement on this basis. Projects are individual, except in special work. In any such group some pupils will be farther advanced than others and will do different work, though with the same kind of materials. This organization means, further, that these groups will change from time to time, — boys need not work at the bench the whole year nor need girls do so with their needles. Such a change might take place at intervals of from four to six weeks.

Pupil selections and school needs. Pursuant to the demand for provision for individual differences,[1] pupils must be given opportunity to choose something of what they are to make. However, unlimited choice would make helpful school work practically impossible. Organization of the work about the material to be used is a limitation, but ample opportunity for individual choice remains. Pupils of the first and second grades can make a variety of projects of varied designs from cross-stitch canvas. These children should be encouraged to select their own designs, for they are too young to make original designs, or modifications of other designs. In the upper grades much individual planning should be encouraged.

The pupil's selection of his design or project develops an individual interest. More than this there is opportunity in most schools for coöperative handwork which is of real social concern. Pupils should not always make things for themselves. The school has its claims. Boys working in

[1] See Chapter Ten.

wood or metal find interest in making things for the classrooms, hallways, playgrounds, and offices. They take pride in doing such work. Girls working in basketry, cardboard work, decorative work, or textiles may contribute something useful and ornamental to the building. Manual arts students should not be asked to make things or do repairing primarily as a means of saving expense to the administration. To make things in response to school needs may be approved only so far as the work is both congenial and developmental. In this coöperative work for schoolroom purposes there is much that is of great social profit to the pupils in the immediate present and also as preparation for later usefulness.

Suggestions for projects. It is comparatively easy to map out a course in manual arts, for certain grades, where the emphasis is upon a *course* to be followed by all the class. On the basis of the discussion above such a plan of work would not be approved. If we leave to the pupils the selection of what they need or want that may be made of wood, metal, linen, yarn, etc., they will usually find difficulty in thinking of anything they wish to make. Teachers also are apt to be unprepared with suggestions. To meet this situation it is helpful to keep lists of things that may be made. These lists can be cumulative: as pupils get suggestions of things they might make, record should be made. Many lists of handwork projects are given in treatises on handwork, manual arts magazines, and other current periodicals. Even advertisements offer suggestions along this line. Clippings may be collected from these papers and periodicals, and if filed in accessible order they become very helpful. This policy of being constantly on the lookout for useful things to make provides for better education than making projects which have been definitely prescribed in a course of study.

Merely to suggest the type of projects that may be made a very few are here listed according to the groups given above, on the basis of materials used:

Cord, yarn, rags: Bags, mats, rugs, holders, hammocks, tatting edging, stocking caps, sailor's knots.

Paper, cardboard: Boxes, poster work, lamp shade, bookmarks, portfolio covers, blotter pad, reminder pad.

Reed, raffia, tissue-paper rope: Baskets, mats, jardinieres, bird nests, hats.

Textiles: Table runners, whisk brooms, holders, slipper cases, needlebooks, doilies, bookmarks, napkin rings, laundry bags, cushion covers, magazine covers, silver case, wall pockets, articles of clothing, bibs.

Wood: Boxes, spool rack, necktie holder, footstool, fox and geese board, bread board, boats, water wheel, weather vane, bookrack.

Metal: Pin tray, paper knife, bookmark, blotter pad, lamp shade, paper weight, watch fob.

METHOD OF CONDUCTING HANDWORK

Schedule. Schools provide too little time for handwork in consideration of its value relative to other school subjects. Some industrial schools divide the day about equally between manual arts activities and the common branches, but in these schools the enrollment is largely of pupils who are misfits in the conventional school. The pupils are considered as having manual rather than intellectual endowments. Half the day is probably an undue share for manual arts in most schools. However, an hour or an hour and a half each day should be scheduled for handwork. The last hour of the school day is a favorable time for such work.

Designs and specifications. Handwork is advised for the purpose of the projects and as a normal activity for pupils. The quality of work must be carefully considered

both for the value of the project when completed and also for the by-product in training. To make a box so that it will hold a boy's marbles may be sufficient to meet a narrowly utilitarian purpose. It is equally important that the box be shapely, well finished, and pleasing. To this end handwork in schools should not be conducted without considerable study of design and specifications.

There is, to be sure, some danger that emphasis will be placed on the intellectual side of handwork to such an extent that most pupils would find no more satisfaction in handwork than in the formal exercises in grammar and arithmetic. But that danger is slight compared with the danger of treating handwork construction as though it were only for the hands. There is great danger that we may allow crude work to be done with the excuse that the project will serve its purpose and that the pupil is not appreciative of a more finished product. Artistic design and accurate specifications for the work should precede all constructions. Care must be taken not to use this handwork as an opportunity for arithmetic and drawing — mere artificial correlation — but any calculations needed should be done accurately and the drawings made with great care. The constructions should be studied continually with respect to possible improvement in design. Headwork of this sort is an important accompaniment to the handwork. Indeed, it cannot be divorced from it without seriously lowering the standards of the workmanship and also of the school.

Discussion and work. Another means of improving the handwork itself and justifying a more prominent place in the curriculum for this subject is to be found in discussion of the work. Handwork should not be mere shop work. It is bound to become mechanical, superficial, and non-educational if considerable study is not given to it. Discussion with classmates is one of the best means of study in

such work. This discussion should center largely upon purpose, structure, materials, and artistic finish. Originality and ingenuity are desirable qualities in those who engage in manual arts. These qualities are acquired, not by independence, but through exchange of ideas. Such discussion is helpful through all the grades of the school.

Exhibit of projects. All work done in a school should be exhibited. The practice of exhibiting only the best pieces cannot be approved. An exhibit of this work especially arranged for visitors, when usually only the best is shown, has not the salutary effect upon the pupils that a continuous exhibit of the work of all pupils has. This exhibit should be in hallways or in assembly rooms where all pupils are frequently passing and will profit by observing the wide range of work done throughout the school. This exhibit should be continuous; old work should be replaced as rapidly as new material is finished.

Material and apparatus. There is danger of providing too bountiful equipment or of making too limited provision for handwork. Valuable work of this nature can be conducted at very little expense. Ingenuity is a better asset than funds. Consistent with the principle running throughout this volume, that school activities shall be an improvement upon the normal activities out of school, handwork should be of materials that in large part are saved from waste at home. New lumber is much better to work with than old, but at home where a boy has a few tools and something to serve as a bench, old pieces of lumber are made use of because they are available while funds for new material are not. It is important that the schools teach pupils to use such material and apparatus as they may have at home. However, new lumber, new textiles, new cord, and new yarn should be used also. Pupils should be taught to make use of suitable materials at home when such may be had.

RELATION TO HOME LIFE

Boys and girls waste a great deal of time at home because they do not know what to do. In the preceding chapter the story was presented as a means of spending leisure. It is not the only means. Playing games and other play activities discussed in Chapter Fourteen serve a similar purpose. Handwork may also be so used at times, while whatever is made is of secondary value. Usually, however, things are made for the service they render. With proper training and even meager equipment boys and girls at home would have less leisure time because they would be busy in constructive work, or leisure time would be less wasteful by reason of handwork that would be done. Every boy should have some sort of *shop* at home, which may be equipped very meagerly at first; it will be better equipped when its value is discovered. The girl does not call for a special space called a shop; the whole house is hers. Knowledge, direction, and encouragement to make things useful or artistic, or both, are needed; there is scarcely a home which does not need this constructive work on the part of the children. To instruct children in handwork, not as a school exercise, but as an occupation that should have a larger place in the home, is the opportunity and the obligation of schools.

Supplementary Readings

BENNETT, C. A. "The Place of Manual Arts in Education." *Educational Review*, Vol. 42, pages 245–253.

BONSER, F. G. "Industrial Education." *Teachers College Record*, Vol. 12, No. 4, pages 25–43.

CHARTERS, W. W. *Teaching the Common Branches*, pages 185–215.

CRAWSHAW, F. D. *Needed Changes in Manual Arts.* National Education Association, 1912, pages 932–942.

DEWEY, J. *School and Society*, pages 131–137.

DOBBS, ELLA. *Primary Handwork.*

KERN, O. J. *Among Country Schools*, pages 309–341.

KERSCHENSTEINER, G. "The School of the Future, a School of Manual Arts." *School and Home Education*, Vol. 31, pages 278–286.

LEAVITT, F. M. *Examples of Industrial Education*, pages 9–18.

—— "The Place of Technique in Elementary Manual Training." *Elementary School Journal*, Vol. 5, pages 72–76, 1904.

MCMURRY, F. M. *Interim Report, Committee on School Inquiry, City of New York*, 1911–1912, pages 88–92.

ROW, R. K. *The Educational Meaning of Manual Arts and Industries.*

SARGENT, W. *Fine and Industrial Arts in Elementary Schools.*

SNEDDEN, D. "Practical Arts." *Educational Review*, Vol. 43, pages 378–386, 1912.

CHAPTER SEVENTEEN

Representative Outlines

BRIEF OUTLINE OF ENTIRE CURRICULUM

The curriculum which has been discussed in previous chapters has been outlined in great detail on the basis of several years' use in the University Elementary School and after modification by many criticisms given by visiting teachers and those who have adapted portions of this work in their own schools. Space allows the presentation here of only a few representative outlines selected from the work of various grades.[1]

For the purpose of helping the reader to understand these outline studies, he is here reminded of three things:

1. **The purpose of elementary education.** The purpose throughout this curriculum is: *To help boys and girls do better in all those wholsome activities in which they normally engage.*[2]

2. **Principles that guide in the selection of the subject matter.**[3] (1) The curriculum should provide for meeting the immediate needs of the pupils primarily; only secondarily should it provide for the preparation of pupils for later needs.

(2) The curriculum should be expressed in terms of concrete everyday activities of pupils and adults rather than in terms of generalization such as found in traditional subjects.

(3) The curriculum should provide for great individual differences in order to meet varying tastes and abilities of the pupils.

(4) The curriculum should be so organized that the various topics may easily be interchanged not only within any grade during the year, but from grade to grade.

[1] Plans have been made to publish in book form soon the outlines for all the grades.

[2] This was presented in Chapter One.

[3] These principles were presented in Chapters Eight to Twelve.

(5) The curriculum should provide for an acquaintance with both work and leisure.

3. **General outline of the curriculum.** Four "subjects" are used throughout the school:[1] (1) Observation: In Grades I and II, plant life, animal life, people, earth, and sky. In Grades III and IV, local industries and activities. In Grades V and VI, world-wide activities and industries. In Grades VII and VIII, occupations — vocational intelligence.

(2) Play: In Grades I, II, and III, a great variety of games. In Grades IV, V, VI, VII, and VIII, play with nature, electricity, machinery, water, air, etc. All grades: Physical exercises, folk dancing, and free play.

(3) Stories: Reading, telling, dramatizing; singing songs; studying pictures and drawings; assembly exercises; foreign language.

(4) Handwork: A great variety of useful and ornamental articles are made. Only a very few projects are suggested in these outlines. Materials: Paper, cord, yarn, textiles, reed, raffia, wood, metal.

Grades I and II. The curriculum for Grades I and II is arranged by months. However, this organization is determined only in part by the seasons. As is readily understood, much of this work could be shifted to other times of the year, in accordance with Principle Four discussed in Chapter Eleven. Some work is provided in each of the four phases of observation in each month; the figures at the right of names of games refer to various modifications of the game as described in a manual of school games in preparation.[2] It should be said, however, that the games included in these outlines are only a small portion of those being prepared. Some of the folk dances[3] and songs[4] used are given in the Appendix.

[1] These four subjects were presented in Chapters Thirteen to Sixteen.
[2] See Appendix F. [3] See Appendix E. [4] See Appendix D.

The time schedule at the left provides four long periods each day and allows the individual teacher much freedom.

Only two representative outlines of observation are given in this chapter: the wind (earth and sky) and helping others (people). Suggestions on play (pages 396–397), with Appendix F, are helpful as to the conduct of games (see also Chapter Fourteen).

FIRST GRADE — SEPTEMBER

Observation . .	Plant life	Sunflower, morning glory
9.00 to 10.30	Animal life	The spider, the fly
	Earth and sky . .	Water
	People	What we did before coming to school
		Playthings we have at home
Play	Relay contests . .	Bean bags, 1, 2
10.30 to 12.00		Cylinders, 1, 2
	Individual contests .	Ball, 1
		Bean bags, 1
		Roly-poly, 1
	Singing games . .	The mulberry bush
	Outdoor games . .	Come with me
		Drop the handkerchief
		Fox and hen
		Frog in the meadow
	Folk dances . . .	(See Appendix E)
	Free play	*Recess*
Stories . . .	Literature	Dramatizing
1.30 to 3.00		Illustrating
		Listening to stories
		Telling stories
	Songs	(See Appendix D)
	Pictures	(See suggestions on stories)
Handwork . .	Jute, rags	Square mats and holders
3.00 to 4.00		Doll rugs, various
	Yarn	Spool knitting in the making of reins, jumping rope, mats
	Construction paper .	Doll furniture, clothes, costumes
		Circus, merry-go-round
		Animals colored to nature
	Clay	Animals, pets
		Paper weights, pin trays

FIRST GRADE — OCTOBER

Observation . . 9.00 to 10.30	Plant life	Maple tree and leaf
		Chestnut and walnut
		Cat-tail, zinnia
		Grapes, pumpkin
	Animal life	Butterfly, caterpillar, cocoon
	Earth and sky . .	Dew, vapor
	People	What people do at home
		Halloween
Play . . . . 10.30 to 12.00	Relay contests . .	Bean bags, 1, 2, 3, 4
		Cylinders, 1, 2, 3
	Individual contests .	Ball, 1
		Tenpins, 1
	Largely physical . .	Have you seen my sheep?
		Spin the plate
	Singing game . . .	Jolly is the miller
	Outdoors	Black man
		Cat and mouse
		Chickamy, chickimy, crany, crow
		Wood tag
	Folk dances . . .	(See Appendix E)
	Free play	*Recess*
Stories . . . 1.30 to 3.00	Literature	Listening to stories
		Dramatizing stories
		Illustrating stories
		Telling stories
	Pictures	(See suggestions on stories)
	Songs	(See Appendix D)
Handwork . . 3.00 to 4.00	Raffia, grass, straw .	Napkin rings
		Flower stand mats, braided
		Needlebook case
		Doll hammock
	Burlap	School bag
		Porch pillow cover
		Brush broom holder
	Wood strips, clothes-pins, cigar boxes .	Dolls, doll furniture
		Bird houses
		Button boxes
	Periodicals	Use scissors and paste
		Make flower books, animal books, automobile books, funny picture books

FIRST GRADE — MAY

Observation . . 9.00 to 10.30	Plant life	Dandelions
		Lilac
		Snowball
		Fruit blossoms
	Animal life . . .	Red-headed woodpecker
		Flicker
		Bee
	Earth and sky . .	Clouds
	People	How little people spend birthdays
		The May basket
Play . . . . 10.30 to 12.00	Relay	Bean bag
		Potato
	Individual	Ball, 3, 4, 5
		Ring-toss, 1, 2
		Roly-poly, 1, 2
		Tenpins, 3, 4
	Outdoors	Come with me
		Five geese in a flock
		Knots in May
	Folk dances . . .	(See Appendix E)
	Free play	*Recess*
Stories . . . 1.30 to 3.00	Literature	Reading
		Telling
		Dramatizing
	Songs	(See Appendix D)
	Pictures	(See suggestions on stories)
Handwork . . 3.00 to 4.00	Cretonne, denim, flannel	Holder
		Lamp mat
		Needle-case
		Doilies
		Sewing bags
		Laundry bags
	Toweling	Bibs, special designs
		Initials
		Dresser covers
	Macramé cord . .	Knotted bags
		Fancy mats
	Wood, cigar boxes .	Handkerchief boxes (cretonne covered)
		Button box
		Boats
		Wagons

OUTLINE ON THE WIND [1]

1. *The Problem*

Adults readily recognize that the wind is a great helper, at times, and at other times the wind is a real hindrance. This is generally the case with all forms of natural phenomena in earth and sky. In the main, such phenomena are accepted as more helpful than harmful. Children may be readily led to recognize this in the case of the wind. But children may be first interested in the wind as something that blows them fun: the wind thus helps them play. This distinction between helping adults and helping children *need* not be made, but by doing so teachers will probably give to their pupils somewhat more acquaintance and appreciation of this phenomenon.

This topic may, therefore, be divided into three parts:

(1) What the wind does to help people.
(2) What the wind does to hinder people.
(3) What the wind does to give fun to children.

It is probably unwise to attempt to explain to pupils what the wind *is* or what makes it *blow*.

2. *Sources of Information for Teachers*

(Only a few of many references are given here)

(1) *Selected stories*

The North Wind and the Duck. Brooks, *Stories of the Red Children*, page 21. (Dramatize.)

The Wind and the Sun. Bailey and Lewis, *For the Children's Hour*, page 155. (Dramatize.)

The Wind's Work. Lindsay, *Mother Stories*, Book I, page 1. (Illustrate.)

[1] This outline is for First Grade for March.

The Story of Æolus. Beckwith, *In Mythland*, Book I, page 31. (Dramatize.)

North Wind. Robinson, *Skyward and Back*, page 41. (Dramatize.)

How the Wind Fixed Matters. *Half a Hundred Stories*, page 189. (Illustrate.)

The North Wind at Play. Bryce, *Dramatic Reader*, page 33, (Dramatize.)

The Vain Weathercock. Wickes, *Stories to Act*, page 122. (Dramatize.)

The Wind. Simms, *Child Literature*, page 49. (Conversation.)

(2) *Selected poems*

The Wind. R. L. Stevenson, *Child's Garden of Verses.* (Memorize second stanza.)

Who Has Seen the Wind? Rossetti, *Poems for Children*, page 48.

The Wind. Foulke, *Twilight Stories*, page 87.

Which Way Does the Wind Blow? Wilson, *Nature Study*, Book I, page 56.

The Four Winds. Sherman, *Little Folk Lyrics*, page 45.

The Wind in a Frolic. Howitt, Wiggin, and Smith, *The Posy Ring*, page 38.

Song of the Little Winds. (Richards), *Wide Awake Readers*, Book II, page 84.

The Wind. McMurry, *Classic Stories*, page 22.

The Four Winds. Stedman, Lovejoy, *Nature in Verse*, page 255.

The North Wind Doth Blow. (Mother Goose), Williams, *Choice Literature*, Book I, page 127.

(3) *Selected songs*

Gaynor. *Songs of the Child World*, Book I, page 56.

Jenks and Rust. *Song Echoes from Child Land*, page 30.

Neidlinger. *Small Songs for Small Singers*, page 8.
Riley and Gaynor. *Songs of the Child World*, Book II, pages 8, 12.
Stevenson. *Song Book*, page 59.

(4) *Selected pictures*

Easy Road to Reading, Book I, pages 6–7.
Nature and Life Readers, Book II, page 15.
Little Kingdom Primer, pages 84–85.
McCullough. *Little Stories for Little People*, pages 15, 84, 109.
Little Kingdom Reader, Book I, page 26.
Holton-Curry Readers, Book I, page 89.
Wilson. *Nature Study in Elementary Schools*, Book I, page 6.
Summers Readers, Book I, page 9.
Wray. *Little Playmates*, page 59.
Young and Field Readers, Book II, pages 55–89.

3. *Readings for Pupils*

Aldine Readers, Book I, pages 25, 66, 68, 70, 72.
Bass. *Stories of Plant Life*, pages 12–13.
Bryce. *Short Stories for Little Folks*, page 39.
Easy Road to Reading, Book II, page 51.
Holton-Curry Readers, Book I, page 55.
Howe Readers, Book II, page 10.
Ketchum and Rice. *Our Story Reader*, pages 71, 72, 78, 79.
Little Kingdom Readers, Book I, page 27.
McCullough. *Little Stories for Little People*, page 108.
Nature and Life Primer, pages 54, 56, 60, 62.
Nature and Life Readers, Book II, page 14.
Pathways in Nature and Literature Readers, Book I, pages 47–50.
Robinson. *Skyward and Back*, page 41.

Serl and Evans Primer, page 53.
Simms, *Child Literature*, page 49.
Story Reader, Book I, pages 18, 21, 65.
Studies in Reading, Book I, page 138.
Wide Awake Readers, Book II, page 81.
Wray. *Little Playmates*, page 57.
Wind and the Sun (Fable) in:

1. Bass. *Stories of Plant Life*, page 11.
2. Brooks' Reader, II, page 103.
3. Gardner. *Work that Is Play*, page 50.
4. Howe Primer, page 113.
5. Jones Reader, I, page 132.
6. Morse Reader, I, page 124.
7. *New Century Readers*, I, page 96.
8. *Reading Literature Readers*, II, page 11.
9. Summers Reader, I, page 8.
10. Wilson. *Nature Study in Elementary Schools*, I, page 170.

4. *Suggestions for Treatment*

(1) All first- and second-grade pupils have had fun in the wind and they have seen the wind help and hinder people. They are, therefore, ready for a conference. Let this first conference be spontaneous and without teacher directions or organization. Later conferences may be selected phases of the topic and may be somewhat organized.

(2) Blackboard work is a great aid here. Let the pupils be free in illustrating how the wind helps, hinders, and contributes to fun. Paper drawings may be a " refinement " of the blackboard work.

(3) Stevenson's poem, " The Wind," may be learned, and in song is one of the best.

(4) Paper cuttings can be used to good effect in representing drying clothes on the line, turning the farmer's windmill,

flying the boy's kite, turning an umbrella inside out, trees bending, smoke from a chimney. These cuttings in white paper may be mounted on black paper with good effect.

(5) Pinwheels, weathercocks, kites, may be made as wind toys in further study of the wind.

(6) Dramatic work is suggested in the selected stories for teachers given above. These stories should be dramatized as a part of conference study of the wind.

(7) There is rich material here for eight or ten days' work (one hour and a half each day), but probably four or five days would be sufficient.

HELPING OTHERS [1]

1. *The Problem*

Most primary school teachers at one or more times in the year call the attention of their pupils to the importance of helping others. This instruction is usually quite incidental in some lesson in reading, a number or a language lesson, or helpfulness (in the abstract) is the topic for some morning talk.

Helping others is sufficiently important to call for real study by these little people to the extent of about one hour and a half a day for a week. Here is an opportunity for direct service to the home and the community, as well as more immediately to the school itself. This is clearly a problem in helping children do better in their normal and wholesome activities.

2. *Sources of Information for Teachers*

(1) *Selected stories*

Little Ted. *Half a Hundred Stories*, page 69. (Illustrate.)
Snow White and Rose Red. O'Grady and Throop, *The Teachers' Story Tellers' Book*, page 253. (Dramatize.)

[1] This outline is for Second Grade for October.

The Elves and the Shoemaker. Bryant, *How To Tell Stories*, page 109. (Dramatize.)

Dust under the Rug. Lindsay, *Mother Stories*, page 157. (Dramatize.)

The Search for a Good Child. Lindsay, *Mother Stories*, page 121. (Conversation.)

The Birthday Present. Lindsay, *More Mother Stories*, page 85. (Illustrate.)

(2) *Selected poems*

Which Loved Best? McMurry and Cook, *Songs of the Tree Top and Meadow*, page 51.

You Who Are the Oldest. Horace Mann Readers, Book I, page 81.

Somebody's Mother. The Jones Reader, Book III, p. 223.

Little Brown Hands (first stanza). Beeson, *Child's Calendar Beautiful*, page 168.

How to Help. *Studies in Reading*, Book I, page 120.

(3) *Selected pictures*

Dopp, *Bobby and Betty at Home*, pages 48, 55, 56, 64, 70, 72, 76, 78, 80.

Gordon Reader, Book I, page 75.

Horace Mann Readers, Book I, page 87.

Merrill Readers, Book II, page 68.

Serl and Evans Primer, page 62.

Story Readers Primer, pages 29, 31, 38.

Story Readers, Book I, page 60.

Summers Primer, pages 42, 56, 99.

Wide Awake Primer, pages 75, 90.

Wide Awake Readers, Book I, pages 14, 95.

(4) *Selected songs*

Hubbard. *Merry Songs and Games*, pages 74, 184.

Jenks and Rust. *Song Echoes from Child Land*, page 9.

Knowlton, *Nature Songs for Children*, page 74.
Riley and Gaynor. *Songs for the Child World*, Book II, p. 74.
Smith, E. *Songs for Little People*, Book II, page 11.

3. *Stories for the Pupils*

Child Life Readers, Book I, page 68.
Alexander. *Child Classics*, Primer, page 59.
Dopp. *Bobby and Betty at Home*, pages 72, 76, 78, 80, 106.
Grover. *Magnolia Primer*, page 100.
Gordon Readers, Book I, page 75.
Howe Readers, Book II, pages 53–79.
Horace Mann Readers, Book I, pages 83, 85, 86.
Jones Readers, Book I, pages 94, 95, 99.
Merrill Readers, Book II, page 67.
New Sloan Readers, Book II, page 76.
Our Story Reader, page 64.
Riverside Readers, Book II, pages 40, 65.
Serl and Evans Primer, pages 62–64.
Stepping Stones to Literature, II, page 20.
New Sloan Reader, I, page 70.
Standard Catholic Reader, II, page 17.
Story Readers, Book I, page 60.
Summers Readers' Primer, page 56.
Summers Readers, Book I, page 66.
Wide Awake Primer, pages 75–90.
Wide Awake Readers, Book I, page 95, Book II, page 24.
Art Literature, I, page 42.
Child Life Readers, III, pages 79, 90.

4. *Suggestions for Treatment*

(1) First of all, this study must not be treated as a serious lesson in morals. It is a study of one of the joyous activities of children, and only if treated in this spirit will the time and energy given this topic be worth while.

(2) The topic is readily divided into parts such as:

How I help at school:

I pick up paper.
I erase the boards.
I pass the paper and pencils.
I place the chairs.
I straighten the books on the shelves.
I pick up coats and caps that I see on the floor.
I hang up the towel when I see it on the floor.
I keep my table neat.
I lead the marching.

How I help at home:

I set the table.
I carry out the dishes.
I sweep the basement.
I hold the baby for mother.
I get things for mother.
I gather the eggs.
I wipe the dishes.
I sweep the dining room.
I sweep the rug.
I help mother cook.
I put the dishes away.
I sweep the kitchen.
I help papa bring up the coal.
I carry mother's supper to her.
I go upstairs for mother's glasses.
I bring father's slippers.
I bring mother's sewing basket to her.
I bring in the paper every evening.

What I have seen other people doing to help:

A man put on a lady's rubber.
A boy picked up a girl's handkerchief.

A big boy helped a little boy put on his rubbers.
A man carried a lady's bundle.
A man pulled a little boy's sled.
A little girl fell down. A man helped her up.

(3) Thirty minutes may easily be devoted to conversation between teachers and pupils in which pupils tell particular things they do to help others. This will naturally call for more than a mere statement of such helpful acts. For example: "I set the table for mama." (1) What dishes are used? (2) How arranged? Talk about various plans of setting tables. Such considerations contribute to a very much larger helpfulness. The table may be set, and yet not half set.

(4) While working on this topic each day, pupils should be asked to tell of how they helped since yesterday. Even later an occasional report of this kind will contribute to developing the habit of helping. This "follow up" plan of work will develop interest in observing closely helpful acts among people and will develop a wholesome attitude in the pupils.

(5) The stories and songs supply rich topics for conversation. Three stories are suggested above as good to dramatize. Pupils may even dramatize acts of helpfulness in home and community.

(6) Drawing, too, may be appealed to as a means of impressing upon pupils the idea of helping others. Much illustrative work of this kind can be done with profit. These drawings — both on blackboard and on paper — may be labeled, e.g., "I set the table," "I help mother cook," etc. Here is a little writing and reading, each absolutely normal and each highly motivated.

(7) More "reading" might easily be provided; the teacher and pupils may make up a story and write this on

the blackboard. A stenographer could take down the conversation of the pupils in a class conference; a little editing would make this report good reading material.

(8) This topic may be scheduled for any time of the year. It is always appropriate.

SUGGESTIONS ON PLAY FOR SEPTEMBER

The first exercise the first day may well be a relay game. This is even better than enrolling the pupils. Set them at once into an enjoyable activity. The activity should be so intense and enjoyable that the pupils have no feeling of a " school atmosphere " but rather are perfectly at home.

In the relay game, as many as forty can play in one game, twenty on each side. When more than forty are to play, three or four contesting lines may be formed. The pupils must, of course, be evenly divided in the contesting lines. Various methods of dividing the players into equal groups may be used. Some are suggested later.

In these relay games *genuine fun must be the object.* Incidental to fun but also instrumental in enhancing the fun, the following may receive attention from the start: *Free conversation* — This must be courteous and not boisterous. It is an especially good opportunity for the pupils to become acquainted with the names of their playmates. The conversation will naturally be about the game itself. Other topics, even if not related but of good character, should be encouraged. *Graceful movement* — Rough play must be vetoed from the outset. Graceful carriage and beautiful bearing add to the enjoyment. However, teachers must beware of setting too high a standard at the beginning. The game must not be used as an instrument for teaching gracefulness.

One relay game with occasional rests for special conversation or directions may easily occupy thirty minutes.

Drawing upon the board is of interest to pupils at this early stage. By a little suggestion from the teacher, the pupils will spend thirty minutes in crudely but joyfully representing something of the game by simple drawings. In the meantime, many other markings will be put upon the board. Little limitation should be placed upon this in the first month.

In the individual contest games, no scores are in place at first. The *need* for a more accurate measure of relative skill than offhand judgment of the " best " player should determine the time of using numbers. Do not hasten this time.

Conversations and drawings relating to these individual contest games may be provided as with relay games.

The outdoor games are here suggested as school work, not merely " recess " games. They need the same attention as the games suggested above but with much care, lest objections be made.

No paper work need be done on games in the month of September. Larger movements in drawings on the blackboard are preferable.

No reading of games by the teacher is advised in this month, but much conversation is natural and should be indulged in freely.

Camera pictures of pupils at play and their drawings on the board would be helpful. An " at home " attitude should be apparent in the behavior of the pupils.

The teacher need not be embarrassed by having no cylinders, roly-polies, or bean bags. Bottles may be used for cylinders, a potato with a clothespin inserted may serve as a roly-poly, and any object, such as an eraser, handkerchief, or ball, may be used in place of a bean bag. However, these things should be made by the pupils early. They are good " projects " for handwork.

Grades III and IV. The topics for these two grades might be interchanged. For that reason each list of topics is labeled as supplementary to the other grade. Only one outline, the grocery store, is here given for Grade IV. Most of the topics for these two grades could be studied at any time of the year.

GRADE III

Local Industries and Activities

Supplementary to Grade IV

Our Homes
- Foods
  - Harvest — in fall
  - Gardens — in spring. Vegetables
  - Bakery
  - Drug store
  - Candy kitchen and confectionery
  - Home kitchen and dining-room
- Clothing
  - Shoe store and cobbler shop
  - Dry goods store
  - Department store
  - Laundry — wash day at home
- House and Yard
  - Furniture store
  - Dishware and crockery store
  - Wall paper store
  - Hardware store
  - Coal and wood dealers
  - Lawns — grasses
  - Ornamental trees and shrubs
  - Flowers
  - Work and play at home

Our City
- Post office
- Fire department
- Dentist office
- Jewelry store
- Music store
- Florist
- Five-and-ten-cent-store
- The nickel
- Hotels and restaurants
- Parks and playgrounds
- Livery and transfer business
- Blacksmith shop

Grade IV

Local Industries and Activities

Supplementary to Grade III

- Our Homes
  - Foods
    - Flour mill
    - Grocery store
    - Wholesale feed and flour store
    - Meat market
    - Dairy
    - Ice and cold storage (a summer topic)
    - Food and health
  - Clothing
    - Haberdasher store
    - Tailor shop
    - Ladies' furnishing store
    - Ladies' millinery store
    - Dressmaking establishment
    - Clothing and health
  - Shelter
    - Lumber yards
    - Planing mill
    - Brickyards
    - Stone and marble cutters
    - Furnace and tin shop
    - Plumber
    - Electrical supplies
    - Architect
    - House furnishings
    - Shelter and health
    - Furniture
    - Decorations
    - Heating
    - Lighting
    - Electrical conveniences
    - Meters
- Our City
  - Water, light, gas
  - Street department
  - Railroad stations
  - City government — including law offices (include county government at county seats)
  - City schools
  - Doctors and hospitals, oculists
  - Banks
  - Express offices
  - Real estate, insurance, and allied business concerns

THE GROCERY STORE

The Store

I. Draw a map of the town, showing principal streets and locate the grocery stores by names. Locate home of the pupil and his own store in case each pupil makes his own map.

II. What kinds of goods do grocers handle?

1. Make out classified lists, one at a time, as suggested by outline.
   (1) Cereals and crackers: oatmeal, rice, flour, wafers, etc.
   (2) Beverages: coffee, tea, etc.
   (3) Spices and extracts: pepper, nutmeg, vanilla, etc.
   (4) Fruits: apples, oranges, etc.
   (5) Vegetables: potatoes, celery, etc.
   (6) Meats.
   (7) Other foods.
   (8) Other articles.

2. Arrange these in alphabetical order. Indicate:
   (1) Staples.
   (2) Luxuries.

3. In what are these groceries kept?
   (1) Make list of articles kept in bulk.
   (2) Specify the form of containing vessel.
   (3) Note sizes used, amounts contained.
   (4) Make list of articles in case or can. Note character of containing vessels, and sizes and quantity of such vessels.
   (5) Make drawings of interesting or peculiar cans, cases, or vessels.

4. How long may various articles be kept?

(1) Classify leading articles into two or more groups.

a. Those readily decaying.
b. Those wasting slowly.
c. Those long preserved.

(2) Note form of decay or loss. These may be designated as:

a. Rotting.
b. Molding.
c. Drying.
d. Becoming stale, etc.

Source of Groceries

I. Where do our merchants get their goods? (The original source and not the wholesale stores is intended.)

1. Take time to locate chief ones only, and chief places.
2. Method.

a. Turn to index; e.g., Carpenter's *Geographical Reader*. Read references of various grocery products.
b. Locate on map where situated. Note climate and soil needed.
c. Pupils make record on outline map.

II. How do these products grow?

1. Describe the plant or tree. Make drawings.
2. Note the time of fruit bearing.
3. It is hardly possible to study the farming of such at this time.

III. In what form are these products sent?

1. Note especially how certain fruits, for example, are prepared against damage and decay.

IV. At what seasons are certain groceries in the market?

Special results should be the distribution maps, with brief statements in explanation. Also drawings and descriptions of the plant from which the product comes.

Special Studies

I. What are the special characteristics of various grocery products?

1. Examine, e.g., the banana; its form, size, substance, taste.
2. Illustrate in drawings or water colors (drawing to scale).

II. What uses are made of various groceries?

1. If possible here, do some work (in the department of home economics) preparing groceries for the table.
2. Write up results in the form of recipes.

III. (Preparation and preservation belong to the problem of manufacturing in the sixth grade. Therefore omit here.)

Special results may be:

1. Classified lists, well arranged and neatly written.
2. All articles spelled correctly.
3. Special drawings, e.g., berry basket or olive bottle with raised bottoms.
4. Descriptive report including 1, 2, and 3, illustrated by any suitable pictures that may be found.

Purchasing Groceries

I. What groceries do we use at home?

1. Prepare at home lists of principal groceries used.
2. Ask parents to estimate the amounts used each month, or secure these from monthly bills. (Care must be taken not to provoke parents by asking too much from them.)
3. Calculate amounts for a year. Work this out with considerable care and in good form. Multiplication tables must be well *used.*

II. How are these articles purchased?

1. Note how different articles are measured; e.g., case, box, bottle, weight, measure.
2. Make out a table of prices. (Compare with lists of previous years.)
3. Study the scales — principle of balance.
   (1) Make drawings or models as illustrations.
   (2) Study the " machine method " of calculating cost of an article.
   (3) Study tables of weights used.
4. Study dry and liquid measure.
   (1) Note the difference.
   (2) Study the two tables.
5. Study grocery bills.
   (1) Get billheads.
   (2) Make out many and calculate rapidly.
   (3) Receipts.
   (4) Calculate annual expense.

III. How do our various groceries compare with one another?

1. Make the comparisons on basis of annual cost. Consider leading articles only: flour, fruit, sugar, etc.

2. Results may be in form of table, or fractional relations indicated by drawings.
3. Comparisons may also be made with other expenses, e.g., rent, coal, etc.

Special result might be written report on this study, fully illustrated with arithmetical problems, drawings, tables, etc. (This topic is very important and needs to be executed with emphasis on good form, and with rapidity and accuracy.)

Grades V and VI. A time schedule for these topics is suggested, but this schedule is very flexible and can be changed easily. One outline is here given, — transportation for Grade VI. Sources of information, especially in the readings possible for pupils of this age, are important in planning the work.

GRADE V

World-wide Industries and Activities

TOPICS	APPROXIMATE TIME	
Recreation	3 weeks	Sept.–Oct.
Local sport		
Water resorts		
Mountains		
Travel and sightseeing		
Fishing	4 weeks	Oct.–Nov.
Hunting	5 weeks	Nov.–Dec.
Lumbering — forestry	5 weeks	Dec.–Jan.
Manners and customs	6 weeks	Feb.–March
Mining	4 weeks	March–April
Coal		
Iron, lead, etc.		
Gold, silver		
Oil		
Farming	6 weeks	April–May
Crops		
Animals		
Machinery		
Soils		

GRADE VI

World-wide Industries and Activities

TOPICS	APPROXIMATE TIME	
Business and labor	5 weeks	Sept.–Oct.
Banking		
Commerce		
Real estate		
Trades		
Manufacturing	8 weeks	Oct.–Nov.–Dec.
Textiles		
Wood		
Iron		
Clay — glass		
Transportation	8 weeks	Dec.–Jan.–Feb.
Local transportation		
Animal — roads		
Steam		
Ship — water		
Electricity		
Gasoline		
Aëroplane		
Governmental activities	6 weeks	March–April
Army		
Navy		
Post office		
Government	5 weeks	April–May
Local		
State		
National		
Health and village improvement	3 weeks	May

TRANSPORTATION [1]

Local Transportation

(The purpose in this section is to give pupils a sense of the amount of traffic that is going on about us, as a part of the life we are living. This section of the study gives pupils an introduction to transportation at large.)

[1] See Appendix C for list of readings used.

I. What are the things transported in this city?

1. Let pupils make observations of the extent and variety of things passing their own home, or a given place, in a given time.
2. Enumerate a large number of things under such classes as:
   (1) Foods (delivery of groceries and the like).
   (2) Clothing (merchants delivering hats and shoes).
   (3) Shelter (returning a borrowed umbrella).
   (4) Tools (placing knives and forks on the table).
3. Discuss the purpose in all this moving about.

II. Note the great variety of agents and instruments used in this transportation.

1. The kinds of power used: ponies, horses, mules, oxen, men, electricity, steam, gasoline.
   (1) Under what circumstances is one of these agents used rather than another? Let boys make inquiries of livery men, transfer companies, street contractors. (In this work boys should be selected with care, probably two to go to each place that would probably gladly supply information. This is good "home study" or it may be done in school hours. It also encourages the boy to inquire on everyday topics.)
   (2) Some information might also be secured on the relative amount of investment and the probable difference in profit. Annual cost of keeping a horse may be calculated.
2. The kinds of vehicles and other instruments.
   (1) List the variety of carts, wagons, etc.
   Study their structure. Note names of various parts.

(2) Note other instruments and their use: e.g., crowbar, wheelbarrow, pulley, teeter-board, swing, etc. Pupils may here come to understand the general principle of the lever. Make drawings to illustrate.

(3) Prices of various vehicles and instruments may be secured and something of the service they can give.

III. Where in the city is transportation chiefly carried on?

1. Make an outline map of the principal streets and transportation centers; e.g., railway depots, stores, lumber yards, etc. (This map should be made to scale.)
2. Designate on this map lines of transportation.
3. Note conditions that determine centers and lines of transportation.

Animal Power and the Public Highway

(The horse and mule have already been noted in Local Transportation. They are used extensively in other countries, but in some other countries characteristic animals are used.)

I. Animals and vehicles in other places.

1. Mexican ox and oxcart.
2. Eskimo dog and sled.
3. Irish jaunting car.
4. English hansom.
5. Reindeer and sled.
6. Camel on the desert.
7. Elephant in India.
8. Buffalo in southeast Asia.
9. Llama in South America.

10. Dog and man or woman in Holland and Belgium.
11. Wheelbarrow and chair in China.
12. Jinrikisha in Japan,

etc.

Make drawings and statements to describe them and their uses.

II. Roads and bridges.

1. Describe dirt, corduroy, macadam, brick, asphalt, etc. Where are these most to be found? What advantages and disadvantages?
2. Calculate approximate cost of brick, asphalt, or the like on your parents' property. (First secure price per unit.)
3. Note by name various bridges:

Covert.
Suspension.
Covered.
Draw.
Cantilever.

Steam Railway

I. The engine.

1. Read of Watt and the teakettle. Experiment at home with a teakettle.
2. Study principle of engines. Visit engineering laboratory and observe chief features of the engine. Visit the railway station. (Secure model of an engine, if possible.) Study diagrams showing important parts — especially piston and valves.
3. Make drawing of steam chamber, piston, etc.
4. Construct a piston of a glass tube of large diameter; construct valves and show how valves act under pressure of breath in place of steam.

5. Study strength of engine. Compare with team of horses pulling two tons of coal (the usual amount delivered in cities).
6. Ascertain coal consumed. Figure costs between distances.

II. Cars drawn by engines — Make an excursion to examine cars.

1. Cars: freight, box, coal, express, mail, passenger, Pullman.
2. Study structure, weight, capacity, dimensions.
3. Note structure of the trucks, and study structure and principle of the air brakes. Make drawings; explain by descriptions and calculations.

III. Roads and routes.

1. Study kind of ballast, bed; ties, kind of wood, length, weight, shape; rails, how laid; grades on road.
2. Study chief railroad routes in the United States. Explain location of routes and centers. (Study railroad map.)

IV. The traffic.

1. Study the switch. Make drawings to illustrate signals, colored lights, whistles, arm movements, and block system.
2. Study rates of speed distances.
3. Note the train crew and duties.
4. Estimate and ascertain price of tickets between various places. Note Pullman rates and regulations; freight rates and regulations.
5. Study standard time. Make clear our dependence on longitude and time.

Waterways

I. The rowboat (as type of simplest boat), showing general appearance of the boats and the principle of the lever.

1. Introduce by oral discussion, noting:
   (1) Shape, bow, stern.
   (2) Bottom, flat, keel.
   (3) Position of seats.
   (4) Location of oars, shape.
2. Study principle of the lever.
   (1) Show general resemblance between oars and any lever.
   (2) Construct a lever and measure by scales and ruler, "power," "weight," and "arms."
   (3) Calculate weight of a boat when a man of given strength pulls.
   (4) Find application — illustration — elsewhere and study quantitatively.
   (5) Make drawings of the oar as lever.

II. How boats are constructed.

1. Begin the study in class by naming, characterizing, and illustrating as many kinds of boats as class can.
2. Supplement this list by study of readings (see encyclopedias for names and classes of boats).
3. Study parts of boats; e.g., rudder, keel, propeller, wheel, pilot house, bow, stern, etc.
4. Study arrangements of boats for cabins, engine room, freight rooms, dining saloons, hospital, reading rooms, lounging rooms, smoke rooms, gymnasium, etc.
5. Collect pictures, clippings, for illustrations.

III. How boats float and how much they carry.

1. Weigh wood, stone, or iron, and water of about the same volume. Compare.
2. State and illustrate by drawing the principle of floating.
3. Calculate cubic feet of water displaced by ship of known tonnage.
4. Calculate relation to some large building, in cubical contents.
5. Calculate number of coal cars needed to carry an equal weight.

IV. How boats are managed.

1. Study ship's crew and duties of each member.
2. Study means of signaling; e.g., starboard, port, flags, whistles, lights, etc.
3. Study harbor guides; e.g., bells, buoys, lighthouses, etc.

V. Ocean travel.

1. Topics.
   (1) Size of ocean steamers — speed.
   (2) Routes — with location of ports.
   (3) Longitude and time.
   (4) International date line.
   (5) Compass — direction by stars.
2. Method.
   (1) Compare length, width, and depth of well-known steamer with local objects or distances paced off.
   (2) Show by maps various routes with ports.
   (3) Work out table of longitude and time. Calculate differences in time between two ports

when steamer is leaving. Note carefully meaning of international date line.

(4) Compare rapidity of sailing with speed of train. Compare knots and miles.

VI. Inland waterways.

1. Name and locate navigable rivers.
   (1) Specify chief transportation carried on.
   (2) Note length of such rivers, speed, cities connected.
2. Study lake traffic, especially the five Great Lakes.
   (1) Consider kinds of freight; direction of such transportation.
   (2) Consider routes of travel for recreation on such lakes.
3. Canals.
   (1) Topics.
   Location — names of.
   Service rendered — purpose.
   Shape of canal boats — size.
   Power — speed — cost.
   Locks — principle and working.
   (2) Method.
   Use geographies to find location, names, purposes. Note service rendered.
   Study shape and size of boats — reasons; make drawing.
   Study how a boat can "climb a hill." Principle of locks.
   Make drawing.

Electric Car and Automobile

(Outlines not presented here.)

Telegraphs, Telephones, Cables, Compass, etc.

(Outlines not presented here.)

Airships

(Outlines not presented here.)

Grades VII and VIII. No outlines are presented for these grades. The method of the work resembles closely that for Grades V and VI, although the work of these last two grades is not so fully developed as that in earlier grades. Further, recent incorporation of these grades — and Grade IX — into a junior high school calls for a very slight modification of plans.

GRADES VII AND VIII

Vocational Intelligence

(Only a few Vocational Activities are here listed)

For Study by Boys and Girls

The Merchant
The Doctor
The Lawyer
The Photographer
The Librarian
The Landscape Gardener
The Teacher
The Miner
The Farmer
The Forester
The Common Laborer
The Manufacturer
The Printer
The Banker
The Governmental Official
The Stenographer and Secretary
The Commerical Traveler
The Carpenter
The Mason
The Vegetable Gardener

(See various vocational surveys for suggestions for further vocations for study.)

Statement Outline for Chapter Eighteen

The problem of relative emphasis is present in all teaching.
- Three aspects of school work are here considered:
  - Motive refers to the mental attitude of pupils.
  - Material refers to the subject matter studied.
  - Method refers to the mode of work by the teacher.
- There is great variation in the relative emphasis given these three aspects of school work.
- The question of emphasis is the question of relative values between pupils' progress, subject matter studied, and work of teacher.

Emphasis upon material makes the pupil subordinate to the subjects he studies.
- The source of subject matter is human experience.
- The nature of subject matter consists of generalizations of experience.
- This subject matter is variously used in schools:
  - As a means of interpretation and guidance of children's activities.
  - As occupation and standardization in school.
- Abuse is reached in a stereotyped use.
- Principle: Emphasis upon subject matter slights the pupil.

Emphasis upon method indicates a wrong relation between pupil and subject matter.
- Method is the adaptation of mind to a foreign subject matter.
- General methods do not "work" in every case.
- Special methods are not always reliable.
- Devices are "gingerbread" methods for special cases.
- Principle: Inappropriate subject matter calls for method.

Emphasis upon motive recognizes normal activities and needs of pupils.
- Motive is an advance over method.
- Motive is abused when used as a device in teaching.
- Real motive has its source in the normal experience of people.
- Motive should be served by subject matter, not the reverse.
- Incidentals in real life should receive incidental attention in school.
- Principle: Regard for true motives and appropriate subject matter minimizes method.

CHAPTER EIGHTEEN

Material, Method, Motive

The terms used. Motive, material, and method constitute three aspects of school work considered in this chapter. The term " motive " refers specifically to the mental attitude of pupils toward certain subjects for study, or other forms of work or play. Interest is a fair synonym. Pupils have a strong motive for studying arithmetic when there is an intimate relation between the subject matter of that study and certain activities in which they are interested. Motive is essentially that " clear intellectual insight into the needs of individual and social life as grounds for action." [1] Thus in the term " motive " the reference is specifically to the pupils.

Material is here used as essentially synonymous with subject matter.[2] The curriculum is composed of subjects or materials for study. Reading, writing, and arithmetic constitute a part of the traditional material for study in the schools. " How the robin feeds her young; how the oriole's nest is hung," is material studied by Whittier's barefoot boy. The blacksmith shop, the post office, the bean-bag game, the army and the navy, are some of the materials for study listed in this volume. Thus in the term " material " reference is specifically to the objects of study.

Method is essentially the teacher's mode of relating a pupil to his object of study. It is a means of teaching. There are many methods, or ways, of teaching. It is important here not to discuss these various methods, but

[1] Judd, C. H., in Monroe's *Cyclopedia of Education.*

[2] Neither of these terms is recognized in Monroe's *Cyclopedia* as a title, though both are freely used in other articles.

rather to question what emphasis may advisably be given to method in relation to the motives of pupils and the materials of instruction. Thus method is here used with specific reference to the mode of work by the teacher.

Relative emphasis given. There is no universal agreement upon the relative emphasis to be given to these three elements of school work. Six different relations may be found, as indicated in the following tabulation:

First Emphasis	*Second Emphasis*	*Third Emphasis*
Material	Method	Motive
Material	Motive	Method
Method	Motive	Material
Method	Material	Motive
Motive	Method	Material
Motive	Material	Method

All three elements are present in all school work, but there is great variation in the relative emphasis given. Theory and practice in the same school system may not be in agreement. The school work in Portland, Oregon (as announced in 1912–1913), may well illustrate this. In theory, as the principle underlying the course of study, first emphasis seems given to motive. In practice, material seems to receive first emphasis, in that the course of study for the nine grades is divided into fifty-four parts. This organization seems to be upon the assumption that there is a definite amount of arithmetic, language, geography, etc., to be acquired in nine years. This course of work can best be completed by being carefully divided into six parts in each of the nine grades. The details of the material in instruction have first emphasis. Further illustrations of such differences are unnecessary.

Significance in emphasis given. On which of these three elements the first emphasis is placed is of considerable im-

portance. In theory (though this may not be formulated), most school teachers, administrators, educators, and parents would quite agree that the school should be conducted strictly in the interests of the pupils. In school practice, this point of emphasis has been seriously questioned.[1] Place the first emphasis upon material, and pupils' and teachers' methods become only means of working over the subject matter selected. Place the first emphasis upon motive, or the sense of a real and normal problem for the pupil, and material and method become agencies to be used by student and teacher in working out the particular problem. The practice of the traditional school seems clearly to place first emphasis upon material, as outlined in the course of study. Some normal schools and other professional training schools emphasize method. Students of social and industrial life see in subject matter and method only means of increasing the emphasis upon the real problems of the pupils. Motive is given chief emphasis.

A closer examination of material, method, motive, and their relationship is important. In general, too little attention is given to the problem involved. The viewpoint taken and the consequent relative emphasis given in the conduct of school work are factors of great influence upon pupils in school and community about the school.

THE EMPHASIS UPON MATERIAL

The source of subject matter. Very few teachers wonder as to the source of the subject matter contained in the arithmetic, the language, or the reading which they teach. Such reflections may hardly be expected of the practical school teacher; it is so much easier to accept the course of study without thought, and then teach with vigor but without

[1] The reader is referred to the many school surveys, some of which were considered in Chapter Four.

perspective. But some consideration as to the source of what we are teaching contributes much to the viewpoint in teaching.

It is clear that the subject matter of our study has its source in the experience of people. The early Babylonians [1] wrote and read. Their crude pictograph method of recording and communicating ideas was used when recording and communicating ideas were called for. Reading books for school exercises came very much later. Arithmetic became a subject for study only after people had considerable quantitative experience. Among the earlier peoples arithmetic was a strictly utilitarian subject.[2] The Babylonians, the Chinese, the Greeks, and the Romans laid first emphasis upon the subject for commercial purposes. This means that after certain experiences of a quantitative nature, people recognized the need of instructing the youth in anticipation of meeting such situations. Geography is a very much younger subject than reading, writing, or arithmetic, because experience that supplied such subject matter came later. Our grammar and studies in language forms developed only after people had used language quite extensively.

The nature of school subjects. School subjects are virtually pigeonhole arrangements for classifying experiences for the purpose of study. And yet it is not the experiences that are classified, but rather generalizations from those experiences. Arithmetic, for example, is a statement of how people multiply when they have transactions involving repeated combinations: as in making purchases, calculating areas, figuring interest. People do not experience arithmetic, but they have a great variety of experiences involving quantity. The quantitative aspects of these experiences

[1] Huey, E. B., *The Psychology and Pedagogy of Reading*, page 187.
[2] Smith, D. E., *The Teaching of Elementary Mathematics*, pages 1–18.

are generalized and expressed in terms of addition, multiplication, fractions, and percentage. Thus we may think of arithmetic as the cross section of a great variety of experiences on the quantitative level. Language books do not describe real experience, but generalize experience on the language level. Even geography, so generally defined as the description of the earth as the home of man, outlines general conditions for life more than it describes actual experiences of real people.

This view of the nature of school studies suggests an explanation for the new subjects as they appear from time to time in the curriculum. Manual training came to be a subject in school when it was deemed best to study certain aspects of experience for which there was no pigeonhole provision. Arithmetic and drawing had already included parts of what is now in the subject of manual training, but neither one nor both together could include all that was needed. A recent book advocates the addition of a new subject in the curriculum, "industry."[1] This new subject is suggested because in recent years industrial life has become so prominent that the traditional subjects do not adequately provide a place for this in the curriculum.

Thus our usual subjects of study have their source in the experiences of people. Certain aspects of these experiences are selected; comparisons are made and generalizations reached. These generalizations constitute the arithmetic, grammar, geography, and other subjects used in school. The daily paper reports the rise and fall of market prices. Insurance companies publish annual reports of their financial transactions. But the arithmetic describes the general character of gain and loss in terms of percentage.

Use of subject matter. Now that racial experience has developed this subject matter and custom has organized

[1] Cole, P. R., *Industrial Education in the Elementary School.*

it into what we know as the curriculum, it is natural to ask what use the school is to make of it. Professor Dewey has pointed out the two uses which are more generally advocated: interpretation and guidance.[1] A child's activities must be interpreted in terms of certain growth tendencies. Child life is not final; it has meaning only as it gives indications of attaining unto the results of racial experience, as expressed in the various subjects of study. Thus in terms of this subject matter the child's successes and his failures are to be appraised. Then, too, the child must be guided in his activities so that he shall develop into the attainments of the adult. If the "studies" now constituting the curriculum are a generalized statement of racial experience, they may be used to give direction to children in their efforts to attain to the position reached by their elders. Thus, as Professor Dewey says, the curriculum is as a map which serves to economize effort in preventing useless wandering and in leading most quickly to desired results.

In theory these two uses sound well; in practice they appear well to school men and school communities. But close inspection of the traditional school work reveals the truth that this subject matter used as interpretation and guidance is narrow when compared with the widely varied experiences of the child and the adult. How much of a boy's daily activities can be interpreted adequately in terms of arithmetic, spelling, grammar, geography? Where, in the traditional curriculum, is to be found the subject matter by which may be interpreted a boy's initiative, his vigor, his judgment, his honesty, in his work? Moreover, in real life, the father who leads his son to aspire to business or professional success does not usually direct his son to the arithmetic, spelling, or geography of that business or pro-

[1] Dewey, J., *The Child and the Curriculum*, pages 18–30.

fession. Effective guidance is in terms of certain social or industrial activities. A boy is guided toward mechanical engineering by his vision of the personal satisfaction and social and industrial service of the engineer. How much of personal satisfaction or industrial service, however analyzed, is found expressed in the Three R's and allied subjects?

A further use of the traditional subject matter is seen in its being used as a standard by which the masses of pupils are kept somewhat together. This is a very common use, — indeed it is almost universal. How easily a stereotyped curriculum can be used as the standard by which to keep a widely differentiated group of pupils on about the same level of attainment! Closely related to this use of the curriculum is that of regarding it as a form of " busy-work." Children must be employed while they are maturing from the age of six to that of fourteen. This subject matter, constituting the eight years' course of study, serves well to occupy the thousands of children during this time.

Unquestionably children in school should be employed. Some form of " busy-work " is imperative. And in real life there are standards of living. But this busy-work is sham and these standards are unavoidably low, when the traditional curriculum is put to such use. One is again reminded of " Emmy Lou laboriously copying digits " as a type of occupying time during this period of maturing. Just this type of number work has resulted in the standardizing of arithmetical work throughout our schools. There is great uniformity in the character and amount of arithmetical work assigned to the various grades in the schools of the country.[1] So long as chief emphasis is placed upon the subject matter of instruction the curriculum will be

[1] Recent attention given to standardizing school work by means of tests is very likely to narrow the subjects of study and mechanize the methods of instruction. Further consideration of this is given in Chapter Nineteen.

more and more stereotyped and narrowed. Such emphasis demands definiteness in this subject matter. The result is seen in the Three R's and other traditional subjects, in which there is almost universal correspondence as to nature and scope. With this curriculum thus definitely fixed, it is most natural to use it as a means of interpretation and of guidance; to use it as a form of pupil-employment and pupil-attainment.

Abuse of subject matter. This use to which subject matter is put easily leads to a serious abuse. The situation is virtually this: Racial experience has developed and formulated a quantity of information which, in school, is known as the course of study. It is then assumed that every bit of this subject matter must be used. This means that any unit of subject matter may be approached with the question: What purpose has this for the student? But there are some very positive objections to approaching subject matter in such a way, and there are many difficulties in such a course. In the first place, much of the material for study consists of mere facts in which the author has no purpose other than supplying any reader with information. What purpose has an author of a geography in presenting a short paragraph on forests in the Middle Atlantic States? In a similar way facts in spelling, language, arithmetic, etc., are presented. The teacher and pupil cannot go to such facts and ask, What is the purpose in them? and then add, That purpose shall be mine in studying them. Facts have no purposes. They are merely available material for the student who uses them in the solution of problems. An account of the discovery of America, as such, has no purpose. A student may use the facts recorded to help him show how the civilized world has developed. Another student may use the same facts to help him show how the Indian race is becoming extinct. Again, the author of some

work on history, philosophical essays, or poetry might have a purpose in what he presents. The student must usually judge of that purpose by the nature of the content, for the author's purpose would not be stated. It is impossible to ascertain whether the student judges correctly or not. To insist that in a given unit of subject matter there is a purpose for the student is to misuse that subject matter.

Moreover, if such purposes were to be found in the subject matter studied, the student would be denied purposes of his own. It will be pointed out later that the student should come to his subject for study with purposes of his own. Purposes, real problems, are the inspiration for the best of study. Deprive a student of his own problems by determining such in the subject matter selected by others for his study, and little real studying is possible. This seems an abuse to the student. It is so, but it is also an abuse of subject matter, in that its services are thus limited to problems said to be contained.

There is a further abuse. If the subject matter is made to determine the purpose for the student, the problems will soon become stilted and formal. If " every unit of subject matter has a function, which its structure is organized to perform," [1] that particular problem will recur as often as that topic appears for study. For example: A teacher is using Westerman's *Story of Ancient Nations* as a text in history. The problem assigned for paragraphs 238–245 is, " To show how Greece is at last united in an offensive policy against Persia by Macedon." [2] If this one problem is to be found in this subject matter, rather than the subject matter used by the student who comes to the text with his own problem, then that same problem will recur from year to year, as often as a teacher and her class come to those

[1] Charters, W. W., *Methods of Teaching*, page 93.
[2] Quoted by Hall-Quest, A. L., *Supervised Study*, page 272.

eight paragraphs. This means a serious abuse of those paragraphs in this stereotyped use and also in the limitations to this one problem.

Effect of such emphasis. The foregoing discussion readily leads to this principle: *The more emphasis is placed upon subject matter, the less attention is given to the pupils.* Practice in the traditional school seems clearly to place more importance upon the subject matter studied than upon the boys and girls who are to do the studying. Racial experience has shaped the school studies. It then seems the work of teachers to shape boys and girls to those studies. Modern theory is, of course, against this and in favor of adjusting school work to the children who come to school with real problems. But practice lags behind theory.

THE EMPHASIS UPON METHOD

The problem of method. Emphasis upon subject matter gives rise to the problem of method. It is simply this: Racial experience expressed abstractly in the form of the traditional school subjects does not strongly appeal to the modern boy and girl. Pupils do not " take to " these studies as ducks to water. But if those responsible for school instruction insist that the traditional subjects be studied by modern pupils, ways and means of inducing them to study must be devised. " The problem of method was conceived as the problem of the adaptation of an individual mind to a foreign subject matter; as an affair of bringing together two things that naturally and intrinsically have nothing to do with each other." [1] The traditional curriculum, if correctly described earlier in this chapter, is " foreign subject matter " to the pupils, arithmetic as a statement of the generalizations of quantitative experience, and grammar as

[1] Dewey, J., in Monroe's *Cyclopedia of Education*, article "Method."

a statement of the principles of language structure have not been a part of the real experience of children. Such subjects are so foreign to the out-of-school life of pupils that teachers must resort to *method* to unite child-mind and subject matter.

Good evidence of the presence of this problem of method is readily found in teachers' meetings, in teachers' conferences with supervisors, in educational publications. This evidence is simply the great amount of attention given to the perplexing questions of how to teach this topic and that subject. Circumstances seem to *drive* teachers to such inquiries and such studies.

General methods. Various general methods have been set forth. Each in its time and place has appeared as *a* general method. (1) " From the simple to the complex " is one of these pedagogical advices intended to help both the young teacher and the younger pupil. For example, the sickle is a simple instrument, while the modern reaper is complex. Instruction as to the use of the sickle should be given before pupils are taught anything of our modern means of harvesting. (2) " From the concrete to the abstract " is another of these methods that ring so true but are so misleading. For example, on a Monday morning the teacher faces the fifth grade class in arithmetic. The lesson is upon the principle: the percentage is equal to the base multiplied by the rate per cent. The pupils read the statement and do not understand it. The teacher recognizes the difficulty and intends to *approach* the problem through what is assumed to be concrete. The attention of the pupils is called to the practice of some merchants who allow their customers five per cent off for cash. This five-hundredths, or five cents on the dollar, paves the way to a principle, thereafter regarded as understood. (3) " From the known to the unknown " is essentially the principle of apperception,

and is generally accepted as the inductive method of instruction. This inductive method has been widely used. The method is sufficiently inclusive to provide for various forms. The Herbartian "five steps" is one of the most frequently used plans,[1] and is considered the natural mode of learning for the pupil and therefore the best method of teaching for the instructor. The leading emphasis in these five steps is generally placed upon the first one, viz., preparation. One author goes so far as to say, "Indeed there is hardly a single recitation which should not start with a brief review or a few questions to freshen up in the minds of the pupils the points related to the coming lesson. Not only will this insure that the lessons themselves shall be better understood, but the entire subject will in this way come to possess a unity instead of consisting of a series of more or less disconnected lessons in the mind of the child." [2]

Other general methods may be merely named: the deductive method, the analytic method, the incidental method, the developing method, the topical method, the "telling," lecture, or supplemental method. This does not complete the list of general methods conscientiously used by hundreds of teachers.

These methods are not mutually exclusive and it is doubtful if those who use them or perhaps even those who discuss them are able to make clear distinctions between them. But one purpose is common to all teachers and to those who seek to expound these methods. That purpose is this: to provide a means of "bringing together two things that naturally and intrinsically have nothing to do with each other," that is, pupil and school subjects.

[1] McMurry, C. A. and F. M., *The Method of the Recitation;* De Garmo, Charles, *Essentials of Method.*

[2] Betts, G. H., *The Recitation,* page 32.

Special methods.[1] Under the guidance of this same purpose and usually in a conscious attempt to follow one of the general methods, teachers resort to special methods in the various subjects. In primary reading, for example, the alphabet, word, and sentence methods have had their day. Other methods used are phonic method, phonetic method, synthetic sound method (Pollard), rational method (Ward), and comprehensive method (Gordon). In geography are used the observational method, journey method, type method, map-drawing method, and topical method. These special methods in various subjects are without limit. They become greatly modified by various teachers. Whatever be the changes made, they are all for the one common purpose, and no other than that for the general methods: an effort to induce boys and girls to study what by nature they are indisposed to study.

Devices. The general and special methods alone or combined have proved inadequate for the realization of teachers' purposes in securing satisfactory application on the part of pupils to their school work. Special methods have been planned to supplement the general methods. The next step is that of supplementing the special methods by devices. "Teaching devices are usually characterized by their peculiar fitness to particular situations. They are ingenious in their simplicity, readily comprehensible, and easily managed by teachers; . . ."[2] The "gingerbread method" of teaching reading, attributed to the German teacher Basedow, is a good illustration not only of the device but of the occasion for such a device. He discovered, as most teachers do, the difficulty of inducing pupils to apply them-

[1] For description and discussion of representative methods of reading, see Reeder, R. R., *The Historical Development of School Readers and of Methods in Teaching Reading;* Huey, E. B., *The Psychology and Pedagogy of Reading;* Klapper, Paul, *Teaching Children to Read.*

[2] Suzzallo, H., in Monroe's *Cyclopedia of Education.*

selves readily to the study of the so-called elements of reading. In the face of this problem Basedow recalled the strong appetites of children and their taste for gingerbread. How natural then that slabs of gingerbread should be made with the alphabet impressed upon them! This procedure is described by an English writer:

> To Master John the English maid
> A horn book gives of gingerbread,
> And that the child may learn the better,
> As he can name, he eats the letter,
> Proceeding thus with vast delight
> He spells and gnaws from left to right.[1]

The New England Primer was itself a device. "Easy syllables for children" are presented; first arranged with the vowels as initial letters, e.g.,

ab	eb	ib	ob	ub
ac	ec	ic	oc	uc
ad	ed	id	od	ud

This arrangement is followed by one in which the consonants lead, e.g.,

ba	be	bi	bo	bu
ca	ce	ci	co	cu
da	de	di	do	du

A few pages later the alphabet is presented by the use of rime and picture combined, e.g.,

> In Adam's fall
> We sinned all.
>
> A Dog will bite
> A Thief at Night.
>
> Zaccheus he
> Did Climb the Tree
> His Lord to see.

[1] Quoted by Reeder, R. R., *The Historical Development of School Readers and of Methods in Teaching Reading*, page 64.

Each of these rimes is accompanied by a little picture illustrating it.

Diacritical marks are used in many schools as a device to help pupils get a start in reading. These marks are soon forgotten by most pupils and are not later used except when reference is made to the dictionary.

In elementary number work many devices are used. The abacus, as now used, is a device, though various peoples have used this instrument much as the adding machine is now used as a means of securing speed and accuracy. Not long ago a teacher in the Buffalo schools published (privately) a book entitled *The Multiplication Chant and Gesture Drill.* She evidently recognized the difficulty of teaching pupils the multiplication tables and resorted to rime and gesture.

> Nine times nine are eighty-one;
> Light and heat come from the sun.

The author's directions are:

" (*a*) In an erect standing position repeat:

> 'Once one is one.'

" (*b*) Turn fully to the left on the word 'light.'
" (*c*) Raise hands and eyes on the words 'and heat.'
" (*d*) Finish rhyme in same position.
" (*e*) Proceed with each rhyme in a similar way."

Other rimes and gestures are given for all the tables.

> Four times seven are twenty-eight.
> A cup of hemlock was Socrates' fate.
>
> Five times five are twenty-five.
> The telephone Edison did contrive.

Illustrated Arithmetic[1] was prepared for pupils who found mathematical work "stupidly uninteresting and hard to

[1] By Colwell, L. W., published by H. M. Dixon & Co.

comprehend." The author found his device in lines, rectangles, cubes, and oblong solids "freely handled, divided, and assembled so as to exhibit the primary number values in clear and adequate form and in a refreshing variety of ways."

It is needless here to note more of these devices, however interesting and even amusing they may be. And the schools are full of devices similar to those given above. A further examination of devices leads to the generalization that teachers resort to such means in teaching those elements in the traditional curriculum which are farthest removed from the commonplace experience of the pupils. Thus it is by reason of the great gap between the pupil's experience and the subject matter presented that resort is taken to ingenious devices. The device is extensively used and quite generally approved. But a close analysis of the device, the situation in which it is used, and the effect of its continued use convinces one that it is at most a temporary expedient. It is a "gingerbread method." Its use is a serious reflection upon the nature of the subject matter presented; it means that the subject matter is not suited to the pupil in his present stage of development. In her anxiety over the immediate effects upon the pupil and by reason of not being trained to analyze more carefully the situation, the teacher quickly uses such devices as are available. The use of devices thus undermines professional teaching. Teaching is degraded to the mechanics of school keeping. The real trouble lies in the nature of the subject matter.

Principle. The foregoing discussion leads to this principle: *The more inappropriate the subject matter, the more emphasis must be placed on the methods used.*

THE EMPHASIS UPON MOTIVE

Motive as an advance over method. Methods[1] and devices may be used as means of inducing response among the lower animals. They are used also in school as a means of influencing pupils.

The closer student of school work, especially the one more deeply interested in child welfare, is turning his attention more to children's motives as the force which produces effective response. In the section above, special method was pointed out as a supplement to general method; and the device was used as a very special expedient when the special method was inadequate. But the close observer of school work notes that artful methods and ingenious devices are not always effective. Motive is recognized as a great force in industrial and social life. Effort is effective when rightly motivated. And the motives of pupils are being more carefully studied as the effective forces in school work. It is in this sense that motive is here presented as an advance over devices and methods.

It seems unnecessary to define the term "motive," though without some comment misunderstanding is likely to arise. The term is prominent in our pedagogical vocabulary and is generally understood. Motive is closely allied to interest and to purpose. It expresses the attitude of an individual toward what he foresees. There is probably less danger of disagreement as to the meaning of motive than of disagreement as to its use. Motivation of school work is a prominent theme in recent educational discussions. Some differences of opinion have been expressed as to *what* subjects in the curriculum most need motivating, and as to *when* and *how* such motivation shall be provided. Scarcely

[1] It is not the intention here to imply that method has no place in the better forms of school work. Reference is to the prevalent schoolroom methods, so kin to devices.

a question has been raised as to a possible mistaken notion as to the relations of real motives and school work.

Misuse of motives. The situation seems to be essentially this: in real life the business man is prompted to reach his office punctually, to attend to his clerical details carefully but with dispatch, to handle his business effectively. His motive — his interest and his purpose — seems to be an impelling and directing force. School men and teachers recognize a kindred motive force in boys and girls of school age. They see them interested in children's activities. They note the purposes that guide these children in much of their out-of-school life. They see how efficient children are in applying themselves to the commonplace activities of children. And it is all so natural. The impelling force comes from within the child, is not imposed upon him by an adult. In school there is apparently a marked difference. But now, instead of resorting to methods and devices, an effort is made to motivate the work to be done. That is, arithmetic, geography, and language must be motivated. The study of these school subjects is recognized as work to which pupils do not come, normally, with strong motives. The teacher tacitly accepts the usual school subjects as material that must be taught to her pupils and she straightway sets herself to the task of securing motives for the pupils that will lead them to apply themselves to their school tasks. The motives secured are those which impel and direct children in their outdoor activities. To such fields of experience, then, the teacher looks. Children play games, and no one questions the strong and natural motives that guide them. To this motive in play an appeal is made. Note one illustration — in the teaching of reading. "*The Express-train reading trip* — The aim is to see how quickly the class, participating individually in turn, as each new word is pointed to, can review from the chart or blackboard

the entire word list they have mastered." [1] The teacher either assumes or pretends that this is a game to be played by the pupils. It is almost certain that no normal-minded child would so consider it. But even if, in comparison with other methods of reading, these pupils accept this for the time as a game, the exercise will not continue long before the pupils recognize that *reading* is the teachers' object for them, not playing at all. It appears as if an attempt had been made to *fool* the children into doing what they were not disposed to do, by getting them to do what, under normal circumstances, they would be greatly pleased to do.

A very different manner of *motivating* school work is to create a situation in which a pupil will be practically forced to do what the teacher wishes. For example: In dismissing the primary class a teacher may say to her pupils, "Follow the directions I place on the board." She then writes, *rise*, *face*, *pass*. If the teacher were dumb or the pupils deaf that method of dismissal would be natural. Under the usual circumstances it is strictly artificial and virtually deteriorates into a formal device though based upon a real motive.

Real life is looked to for motives. The school bank has been used, and under normal conditions what strong motives boys and girls would have in banking for themselves. But how artificial when finding the percentage, base, and rate, as work in arithmetic, is taught by comparing the individual sums deposited with the total sums in the bank; when the decimal point introduced in the third grade is taught by the use of deposit slips! [2]

Pedagogical writings and schoolroom practices allow considerable prominence to "motivation" of the character of the three illustrations given. Those who have thus at-

[1] Wilson, H. B. and G. M., *The Motivation of School Work*, page 65.
[2] *Ibid.*, page 177.

tempted to motivate the traditional school subjects recognize, on the one hand, how strongly and naturally the normal experiences of children are motivated; and, on the other hand, how difficult is the task of inducing pupils to apply themselves to the traditional school work. The motivation usually advocated and so generally used *does* secure an increase in responsiveness of the pupils, but this response is, in consequence, unnatural and forced.

To secure motives in this way from various phases of children's normal experience as the teachers' instrument to induce reaction in school work in accordance with the teachers' desires is a very definite reflection upon the nature of subject matter which the pupils are asked to study. To make use of motives foreign to the subject matter itself is only an admission that the subject matter is not immediately appropriate for the pupils. It is quite noticeable that those who motivate arithmetic, geography, and others of the traditional subjects do not attempt to motivate manual training, agriculture, athletic events, playing games, etc., in the same manner. The conspicuous motives for work in manual training shops, agriculture, and commercial studies are found in the natural results of such activities: e.g., the writing desk made in the shop, the money received from farm products raised, the salary for office work. These results are really the normal motives that lead people into such activities. In reality these subjects do not need motivating. In the work itself pupils have genuine motives.

There is another type of activity often provided in the school under the name of "motivating school work." A fair is arranged or a school paper is published. In the process, "The apparent object always was to raise money to finance some project . . . ," but ". . . if the work and machinery of executing such projects do not become objectionable, interfering seriously with the regular work of

the school, the principal and teachers were primarily interested in each fair because it was the source of an almost countless number of opportunities for relating the home and the school and for motivating the children's school work." [1] In a number of schools the school paper is allowed a place, not on the same basis as the public newspaper, but for the purpose of "the gains to the regular work of the school from preparing and issuing a school paper." [2] The fair and the school paper are only two examples taken from many out-of-school activities which are allowed admission to the school only because they serve, primarily, to motivate other studies.

It may safely be said that where the motive is not foreign to the subject matter, such subject matter is appropriate to the pupil; but when the motive for work in one subject must be found in quite a foreign subject, then that subject matter is questionable. Objection to this position is made on the ground that school work *must* be to a high degree artificial, and that genuine motives, therefore, would not be possible. A child does not take medicine with the same motives that lead him to eat bread and milk. Medicine is artificial and is sometimes necessary, but the subject matter of schools should not be as medicine, to be taken with such unnatural motives, except in special cases.

To use motives foreign to the subject matter itself is usually to abuse such motives. As pointed out above, the motives to which appeal is usually made are found in the normal activities of children. It is an abuse of these activities to use them to induce activities not normal for children.

Here, again, the trouble lies in the antiquated curriculum. Tacitly accept the traditional curriculum as something which

[1] Wilson, H. B. and G. M., *The Motivation of School Work*, page 221.
[2] *Ibid.*, page 236.

must be taught to children, and much of it must be motivated through the use of extraneous subject matter.

The source of real motive. Pupils who study arithmetic which has been motivated by a game, for example, are working under artificial motives, that is, artificial for the time. Real motives come in the course of normal experience. There is no occasion to motivate a fishing trip for twelve-year-old boys. The disposition to go when opportunity offers is readily recognized in the boy as soon as circumstances make that going possible. A boy's normal experiences in real life are seldom without their own motivation. In the case of a boy's not wishing to do what his parents or teachers bid, a firm command has probably a more immediate effect and the discipline is probably much more wholesome than to proceed indirectly through extraneous motivation. It must be admitted that the traditional course of study has not the motivation that is found in the usual out-of-school experiences of youth. This only means that more suitable subject matter is needed. Motives are recognized in real life and should govern the subject matter to be taught.

Motive served by subject matter. Instead of finding motives by which pupils may be led to study arithmetic, subject matter should be found that will enable the pupils to realize the motives that they have. Electric lighting of the streets in town interests the boy, and his motive in studying more fully this aspect of his own environment must be realized by the use of such arithmetical work as quantitative phases of this problem involve. Usual schoolroom policy should be reversed: genuine motives should be served by suitable subject matter rather than motives found to serve stereotyped subject matter. Racial experience has supplied us with a great quantity of subject matter, expressed in terms of the traditional course of study. It has become the custom in schools to follow that organization

of subject matter. To give this up seems to many an impossibility. On the other hand, so much is taking place in the form of social and industrial activities, so much of biological and physical phenomena, that boys and girls are richly supplied with studies and activities highly motivated; and this simply because *young people are concerned with events that directly affect their own well-being.* There is much in the traditional subject matter that will serve in realizing such motives.

Incidental instruction in incidentals. In real life, the multiplication tables, the construction of sentences, the spelling of words, are incidental to the work of the bank clerk, the manufacturer, the laborer. The Three R's are mere tools, useful indeed, but only subordinate instruments in the activities carried out. The traditional school has given prominence to instruction in these incidentals. The life activities in which these subjects are used have received only passing notice. They have been appealed to largely as sources of motivation to quicken the indifferent pupil. Reverse the relation. Place the emphasis of instruction on the real experiences of out-of-school life and the Three-R subject matter will function normally. The best way to teach arithmetic is not to teach arithmetic as such, but to teach experiences in which arithmetical operations function. The electric-lighting system in a town is already strongly motivated for most young people. To study this at all adequately much arithmetical work must be done. Care must be taken to select arithmetical work only as is required by the lighting problem and not, as is often done, to revert to a study of the lighting system as a point of application for certain aspects of the arithmetic being studied.

Principle. This discussion leads to an important principle: *The more normal the pupils' motives and the more appropriate the subject matter, the less is the need of method.*

Motives of pupils in their out-of-school life should guide in school work. These include a wide range of the world of events. These events are the real subject matter to be studied. The formalities of the traditional Three R's are incidental. Teachers and pupils are thus relieved of the perplexing problems of methods and devices. But teachers and school officials (parents, too, may be included) are so in the habit of occupying themselves with formal school arts and an artificially motivated method of teaching and learning that they are afraid to intrust themselves and the school work fully to the normal occupations and the normal motives of children. The principle advocated in the latter part of this chapter insists that effective school work is dependent upon the recognition of the normal motives of children and the selection of subject matter appropriate to those motives.

Supplementary Readings

Adams, J. *Primer on Teaching.*
Bagley, W. C. *Classroom Management.*
—— *The Educative Process.*
Betts, G. H. *The Recitation.*
Charters, W. W. *Methods of Teaching.*
De Garmo, C. *The Essentials of Method.*
James, W. *Talks to Teachers,* pages 91–99.
Kern, O. J. *Among Country Schools,* Chapters III, IV, VII, VIII, XIV.
McMurry, F. M. *Elementary School Standards.*
—— *Method of the Recitation.*
Rooper, T. G. *A Pot of Green Feathers,* Preface.
Strayer, G. D. *A Brief Course in the Teaching Process,* pages 32–113.
Strayer, G. D., and Norsworthy, Naomi. *How to Teach,* pages 34–54.
The Social Motive in School Work, Francis W. Parker School Year Book, 1912.
Thorndike, E. L. *The Principles of Teaching,* pages 21–41, 51–67.
Wilson, H. B. and G. M. *The Motivation of School Work.*

General References

DEWEY, J. *Interest as Related to Will.*
—— *The Child and the Curriculum.*
—— *Interest and Effort in Education.*
—— *Democracy and Education*, pages 146–162, 193–227.
FREELAND, G. E. *Modern Elementary School Practice.*
HALL-QUEST, A. L. *Supervised Study.*
MONTESSORI, M. *The Montessori Method.*
PARKER, S. C. *Methods of Teaching in High Schools.*
RAPEER, L. W. *Teaching Elementary School Subjects.*

Statement Outline for Chapter Nineteen

Measurement of school work has become a prominent educational problem.
- The recent scientific movement asks for exactness in measurement.
- The contents of this chapter are:
  - A brief report on the work at the University Elementary School;
  - A brief criticism of current measurements;
  - A suggestion for measuring in terms of real life.

School work is measured in terms of school work.
- The prevailing custom is to test in terms of school arts.
- Customary tests are wrongly applied to new ventures.
- Pupils who leave the University Elementary School do better than the average in public schools.
- Pupils who graduate from the University Elementary School do better in high school work than do those of traditional training.

Measurement in terms of school work falls short of measurement needed for social service.
- In common practice, measurement goes no further than the schoolroom.
- The wrong thing is measured: school arts rather than the life acts.
- Such measurement leads to a wrong purpose in studying and teaching.

Measurement should be made in terms of life out of school.
- The thing to be measured is the effect of school life upon community life.
- Two principles are suggested:
  - Measurement should be made only when abilities are functioning in normal life;
  - Measurement should be in terms of normal experience.
- Objection to the personal equation involved is not serious.
- Records of readings illustrate the measurement suggested.

CHAPTER NINETEEN

Educational Measurements

THE PROBLEM OF MEASUREMENT

The scientific movement. In recent years a tidal wave of enthusiasm over "standard tests" has flooded the school world. The scientific educator is using these tests as instruments for measuring the educational product of the schools. While these scientific tests are in progress the traditional examinations in school subjects maintain about the same prominence they have held for generations. And in the meantime the general judgment of the community and of individuals is being passed upon the work of the schools just as has been done for centuries. These traditional examinations are conducted presumably in a somewhat scientific manner: grades are assigned according to rather definite rules; averages are computed with much attention to accuracy; records and reports are made with care. Teachers believe in these records as a reliable expression of the results of the work of the school. Pupils place utmost confidence in these records as a measurement of their progress. The community, too, accepts these school reports as though error could not be made in them. And yet this community, when neither face to face with school officials nor influenced by school environment, discusses the school work largely in terms of good or bad, better or worse, satisfactory or unsatisfactory, with little or no reference to the more exact measurements in terms of grades.

The recent scientific movement in education is intended to substitute for the loose and inaccurate judgment of the community a more exact and definite basis for measurement and to improve upon the traditional but heterogeneous methods used in the schools by establishing certain standards

applicable to all schools. The student of education readily recognizes that the parent or community is very liable to serious error in judging offhand that Mr. Brown is a much better teacher than Mr. Smith; or that the fifth grade is doing much better in arithmetic than was done last year. Further, when the attention of teachers and parents is called to the heterogeneous grading systems used, they understand the indefiniteness of the grades and the futility of making any comparisons between two groups of pupils or even between individuals. The recent scientific movement to improve upon these traditional practices is most welcome. However, a serious question must be raised, not as to the scientific method employed, but as to the school product measured by this scientific method. No adequate discussion of this question is attempted in this chapter.

Limitations in this chapter. The contents of this chapter are limited to: (1) a report upon results of work at the University Elementary School in terms of high school work; (2) a brief criticism of measuring school products in terms of school subjects; (3) a statement, with one illustration, of a plan proposed for measuring school work in terms of life out of school. The report upon the work of pupils trained in this University Elementary School is given as one means of substantiating the plan proposed in this volume of substituting for the traditional Three R's in the elementary school a curriculum strictly in terms of life out of school. "By their fruits ye shall know them." The work of this school for the past ten years has been an experiment. The value of this experiment as a suggestion for improving the traditional schools must be judged more by actual results than by the theory, however plausible that theory may be. The plan for measuring school work in terms of life out of school is briefly outlined in this chapter as the natural means of measurement and as the only acceptable

basis for judging the work done in the University Elementary School or in any school instituted for the equipment of the young for their life work in a real democracy.

MEASUREMENT IN TERMS OF SCHOOL WORK

Prevailing custom. Pupils in the grades are usually tested in terms of the work done in the school. The question is: How capable are the pupils in reading, writing, arithmetic, etc.? School work has been done in these subjects, largely, for the immediate purpose of acquiring ability in the formal exercises in these subjects. The tests are applied to discover to what extent the purpose of the schools is being realized. Even in some schools where the purpose is stated as that of preparation for practical life, but where the Three R's prevail as the chief subjects for study, the tests for results are in terms of what is evidently the more immediate purpose, viz., ability in these schoolroom arts.

Customary tests applied to new ventures. "Of course, judging an educational experiment by the pupil's ability to 'keep up' with the system the experiment is trying to improve, is of very little value." [1] And yet this is exactly what takes place. The community, largely through force of habit, judges such an educational experiment in terms of the usual purpose of schools, i.e., proficiency in the common branches, rather than in terms of its special purpose, e.g., proficiency in community life. Thus the work of the University Elementary School will be judged, for some time to come, by the general public in terms which the public is accustomed to use, rather than in terms of the special purpose of this school, *that of helping boys and girls do better, now and later, in all those wholesome activities in which they normally engage.* And this judgment of the community must be respected until the community has been led to judge the

[1] Dewey, J., *Schools of Tomorrow*, page 58.

proficiency of the school in terms of its avowed purpose, just as the proficiency of a business enterprise or an industrial venture is judged by its own purpose. Whether or not we approve of the purpose of a particular school or business cannot affect the basis upon which we judge its efficiency. It seems clear that to measure, at any set time, the abilities of pupils in a school with a purpose of its own by the same tests for which pupils of the traditional school have been especially trained would lead, not only to an unfair comparison, but to useless evaluation of the work done.[1] And yet, when pupils trained in this special school return to the work of the traditional school or advance to other schools where they must compete with students of traditional school training, comparison of work done in such schools by the two classes of students is a reliable means of evaluating the work of the special school in terms of the traditional work. Pupils, parents, and communities may rightly demand of an elementary school venturing to substitute new work for the traditional work that the pupils who may transfer to the traditional school be qualified to carry on the work there without a handicap, provided suitable time is allowed such pupils to adjust themselves to the new conditions. This proposition is in accordance with the principle discussed in Chapter Eight, especially that portion (pages 157–166) which empasizes efficiency now as preparation for efficiency later.

[1] In the spring of 1914 the Carnegie Foundation asked permission to apply to the pupils of this University Elementary School the standard tests used throughout the public schools, as a part of the Missouri Educational Survey then being made. The management of the school had not the desire to make the least objection, but the Carnegie Foundation was requested to accompany any published report of these tests by a clear statement of the purpose of this school. To test second-grade pupils by asking them to write what they remembered of a story read to them, when those pupils had had at that time no exercise at all in composition and no exercise in writing except in copying, is clearly an unfair basis for comparison with second-grade pupils trained in that formal exercise. It is also a useless evaluation of the second-grade work of this special school. However, the results of these tests, when made public, may be very suggestive.

In examining the following reports of pupils trained in the University Elementary School who have gone to other schools, it must be borne in mind that the data are quite limited. The conclusions may not be so reliable as they would be were more cases possible. It is probable, however, that the number of cases is sufficient to warrant these conclusions, at least until more extended studies may lead to contradictory results.

TABLE X

PERCENTAGE DISTRIBUTION OF GRADES RECEIVED BY PUPILS FROM THE UNIVERSITY ELEMENTARY SCHOOL IN COMPARISON WITH THOSE OF PUPILS IN THE CITY SCHOOLS

Percentages in the lower line represent the city schools.

		E	S.	M	I	F
Reading	E.	11.1	48.1	40.1	0.0	0.0
	C.	6.0	35.0	37.0	17.0	5.0
Writing	E.	3.7	48.2	44.4	3.7	0.0
	C.	5.1	24.7	52.5	15.3	2.1
Spelling	E.	11.1	33.3	33.3	22.2	0.0
	C.	13.0	30.0	32.0	18.0	7.0
Language	E.	16.0	40.0	40.0	4.0	0.0
	C.	7.3	25.6	36.5	24.4	6.1
Arithmetic	E.	11.1	33.3	33.3	11.1	11.1
	C.	11.0	18.0	30.0	36.0	5.0
Geography	E.	4.1	45.8	37.5	12.5	0.0
	C.	5.8	22.3	44.7	20.0	7.0
History and civics	E.	18.7	37.4	37.4	6.2	0.0
	C.	3.7	26.2	41.2	22.5	6.2
Physiology	E.	8.3	33.3	50.0	8.3	0.0
	C.	5.3	17.9	44.3	23.3	5.3
Drawing	E.	8.0	32.0	56.0	4.0	0.0
	C.	7.0	24.8	58.9	18.8	2.4
Average	E.	10.7	37.9	41.4	8.0	1.2
	C.	6.6	24.9	41.9	21.7	5.1
Median	E.	11.1	37.4	40.0	6.2	0.0
	C.	6.0	24.8	41.7	20.0	5.3

Pupils' work in grade schools. In the four years from September, 1912, to June, 1916, twenty-seven pupils withdrew from the University Elementary School and entered two ward schools of the city of Columbia. These pupils had had as much as one year in the University Elementary School. Table X presents a comparison of the grades of these pupils with those of the city schools.[1]

Table X may be read as follows: In the subject of reading in the city schools, pupils who had come from the University Elementary School with one or more years' work in that school received 11.1 per cent of their grades as E, in comparison with the city school pupils, whose per cent of E grades was 6.0; they received 48.1 per cent of their grades as S, in comparison with the city school pupils, whose per cent of S grades was 35.0, etc.

If previous training for one or more years contributes directly to the efficiency of pupils in a given work, this table tells a very positive story as to the effects of the training in the University Elementary School. The percentage of high grades, E's and S's, is very noticeably greater for the pupils from the University Elementary School, and the percentage of low grades, I's and F's, is no less conspicuously lower. In only three subjects, writing, spelling, and geog-

[1] The grades used are those received by the pupils in the first year only after entering the city schools, and to avoid any misunderstanding it should be stated that the grades here studied are those given by the teachers in the city schools. The University Elementary School gives no grades.

Inasmuch as the office of the city schools had no data to show the distribution of grades given by the grade teachers, a random selection of one hundred pupils was made from the two schools into which the twenty-seven pupils had gone, and the grades of these pupils for the year 1916–1917 were taken as representative of the distribution of grades for the city. The distribution of the grades, E (excellent), S (superior), M (medium), I (inferior), F (failure), is evidently not in accordance with the normal curve expected in higher institutions. That is, less than 50 per cent of the grades in these city elementary schools are M and more than 25 per cent are the higher grades, S and E. This means that the city schools grade higher than suggested by the normal curve of distribution, but the comparison, in Table X, of two groups of pupils is not thereby disturbed.

raphy, do the pupils from the University School receive a lower percentage of E's than the pupils of the city schools. And in these subjects the sum of the percentages of E's and S's is, in each case, in favor of the University School pupils. On the basis of either averages or medians, it may be concluded that pupils from the University Elementary School secure one half again as many E and S grades as pupils who have had the traditional school training. Moreover, on the side of the low grades, I's and F's, the sum of the percentages of the two grades is in each of the nine subjects strikingly less for the pupils from the University School than for those with traditional training. Again, upon the basis of the averages or medians, it may be concluded that the pupils trained in the University School seldom receive an F grade, while pupils of the traditional training fail to the extent of one in twenty.

The comparatively few low grades received by pupils from the University Elementary School do not *need* explanation. Two facts, however, may be stated. The 11.1 per cent of the grades in arithmetic which are F's were made by three pupils who were not promoted the preceding year at the University School. Also, of all the I's made nearly one half (four ninths) were made by pupils who in the preceding year at the University School had done such poor work in the varied activities of the school that they could not be promoted.

It might be thought by some that, even including those who failed of promotion referred to in the preceding paragraph, the pupils who transferred from the University School to the city schools and there did such superior work were the better ones from that school. Table XI shows that such was not the case. Grades are not used at this University School, but on each pupil's record card (filed in the office but not shown to the pupil) is indicated his rank in the class in which

he studied. This rank is recorded at the close of each half year. Table XI shows in columns *A* and *X* the rankings of the twenty-seven pupils in the various classes in which they studied;[1] in columns *B* and *Y* the number of pupils in those classes; and in columns *C* and *Z* the amounts of deviation above and below the middle of each class. Thus this table may be read: one pupil ranks seventh in his class of nineteen pupils. The pupil ranking tenth is considered at the middle of that class, and the pupil ranking seventh is three units better than the middle one.[2] In the *X*, *Y*, *Z* group, one pupil ranks eighteenth in a class of twenty. The real middle of this class is ten and one half. Thus this pupil ranks seven and one half units below the middle.

This table thus shows that of the fifty rankings, twenty-six are among the poorer halves of the classes in which they studied, and twenty-four among the better halves. Here is an indication that the twenty-seven pupils were *very slightly* below the median of the classes in the University School.

This table also shows that of the 198 units of deviation above and below the middle of the classes, $94\frac{1}{2}$ units are below and $103\frac{1}{2}$ are above. This indicates that the better ones of these twenty-seven pupils *very slightly* overbalance the poorer ones, and on this basis one might claim that the twenty-seven pupils were slightly above the median of pupils in the University School.

[1] The explanation for fifty rankings instead of fifty-four is found in the fact that rankings for four pupils were not recorded in one semester.

[2] This ranking is on the assumption that the degrees of difference between any two pupils are the same.

TABLE XI

DISTRIBUTION OF TWENTY-SEVEN PUPILS AMONG THE BETTER AND POORER HALVES OF THE CLASSES IN WHICH THEY STUDIED

A Rank of Pupil	*B* Pupils in the Group	*C* Unit Deviation above Middle	*X* Rank of Pupil	*Y* Pupils in the Group	*Z* Unit Deviation below Middle
7	19	3	18	20	$7\frac{1}{2}$
5	10	$\frac{1}{2}$	13	19	3
7	19	3	11	20	$\frac{1}{2}$
3	13	4	6	10	$\frac{1}{2}$
5	12	$1\frac{1}{2}$	7	10	$1\frac{1}{2}$
5	13	2	8	12	$1\frac{1}{2}$
2	20	$8\frac{1}{2}$	12	20	$1\frac{1}{2}$
1	19	9	19	20	$8\frac{1}{2}$
7	19	3	13	19	3
6	13	1	8	12	$1\frac{1}{2}$
7	20	$3\frac{1}{2}$	11	12	$4\frac{1}{2}$
3	19	7	13	20	$2\frac{1}{2}$
8	18	$1\frac{1}{2}$	11	19	1
2	19	8	11	19	1
2	18	$7\frac{1}{2}$	14	20	$3\frac{1}{2}$
7	20	$3\frac{1}{2}$	10	18	$\frac{1}{2}$
5	18	$4\frac{1}{2}$	16	19	6
2	16	$6\frac{1}{2}$	18	18	$8\frac{1}{2}$
3	15	5	11	19	1
8	20	$2\frac{1}{2}$	17	18	$7\frac{1}{2}$
9	18	$\frac{1}{2}$	17	17	8
5	16	$3\frac{1}{2}$	16	20	$5\frac{1}{2}$
2	18	$7\frac{1}{2}$	16	18	$6\frac{1}{2}$
2	17	7	13	14	$5\frac{1}{2}$
			10	13	3
			11	19	1

24 rankings in the better half of the classes, with $103\frac{1}{2}$ units of deviation above the middle.

26 rankings in the poorer half of the classes, with $94\frac{1}{2}$ units of deviation below the middle.

Pupils' work in high schools. However plausible the theory and practice of the proposed change in the elementary

school curriculum may seem, the question readily arises: How well will these pupils do their work in the traditional high school if they have not had the usual drill in the common branches? A preliminary study of this question was presented in *The Journal of Educational Psychology* for June, 1915, under the title, "How Well May Pupils Be Prepared for High School Work without Studying Arithmetic, Grammar, etc., in the Grades?" Since that time additional data, sufficient to justify more positive conclusions, have been secured.

During the eleven years, 1907 to 1917 inclusive, one hundred pupils graduated from the University Elementary School and entered one of two high schools. Inasmuch as this school opened in 1905, it is clear that the graduates of the first few years had only the upper grade work in this school. But all graduates of the school from the beginning to the class of 1917 are considered in this study. (On pages 454–456 the relative standing of those who had longer and those who had shorter time in this school is considered.) No attention is here given to those who graduated but did not take up high school work, or attended high schools other than the two here considered. Of these one hundred pupils, fifty-five entered the Columbia City High School, and forty-five entered the University High School.

Table XII is derived from grades made by the fifty-five students entering the Columbia City High School. These grades include all grades made by these students to the close of the year 1917–1918. As a basis for comparison the distribution of grades for the City High School was obtained by taking all the grades, 1701 in number, given by all the teachers during the year 1916–1917.[1]

[1] This distribution was taken as fairly representative for the school. But it was an exceptional year in some respects, inasmuch as no E grades were given that year in mathematics or German. Here may be found explanation for the apparent error in Table XII showing the percentage of E grades in mathematics and German.

TABLE XII

PERCENTAGE DISTRIBUTION OF GRADES RECEIVED BY GRADUATES OF THE UNIVERSITY ELEMENTARY SCHOOL IN LATER YEARS AS STUDENTS IN THE COLUMBIA CITY HIGH SCHOOL, IN COMPARISON WITH THE DISTRIBUTION THROUGHOUT THE HIGH SCHOOL

Percentages in the lower line, C, represent the distribution of grades of the city school.

		E	S	M	I	F
English	E.	4.5	30.9	46.2	16.0	2.3
	C.	2.7	27.7	38.3	23.8	7.2
Latin	E.	4.1	59.2	21.6	8.2	6.9
	C.	3.1	29.1	30.1	19.0	18.5
German	E.	2.8	49.0	33.5	11.8	2.8
	C.	0.0	26.6	35.0	26.6	11.6
History	E.	3.1	35.9	43.3	12.5	4.8
	C.	2.3	27.2	51.7	14.5	4.1
Mathematics	E.	2.9	39.1	30.6	18.9	8.4
	C.	0.0	22.9	24.9	29.3	22.6
Science, manual training, etc.	E.	3.3	21.4	65.9	9.3	0.0
	C.	5.8	31.2	53.4	8.3	0.2
Average	E.	3.4	39.2	40.2	12.8	4.2
	C.	2.3	27.5	38.9	20.3	10.7
Median	E.	3.2	37.5	38.4	12.1	3.8
	C.	2.5	27.4	36.6	21.4	9.4

This table clearly indicates that the pupils trained in the University Elementary School are equal to carrying the traditional work of a public high school. Irrespective of any comparison with the standard set by the city school, it is easily read in the table that pupils from the University Elementary School get many high grades and comparatively few low grades. But the most satisfactory measure here is that by which comparison is made with the work of students with quite a different previous training. The comparison

is strikingly in favor of the graduates of the University Elementary School. This favorable comparison is especially interesting in the two subjects where the gravest doubts have been entertained, English and mathematics. This situation indicates that grammar and arithmetic in the grades are not essential as preparation for English and mathematics in the high school. The Latin grammar is mastered without a preliminary study of the English grammar.

Table XIII shows a similarly favorable comparison for the forty-five graduates of the University Elementary School who entered the University High School. A comparison of Tables XII and XIII will show that in the University High School a larger percentage of the grades are E's, and a lower percentage are I's and F's than in the City High School. If we accept this distribution of grades as a basis for comparison, it appears that the students in the University High School, all together, are intellectually stronger than those in the city school. This is probably the case, as these students are on the average three or four years older and they come to this school from all parts of the state with higher motives for study than are usual with students attending their own City High School. This situation might thus mean that the graduates of the University Elementary School must in the University High School meet stronger competitors than do those graduates who attend the City High School. But in spite of this situation the graduates of the University Elementary School maintain a higher rank in the University High School than they do in the City High School.

Again, it may be noted that these graduates do especially well in English and mathematics, without having had grammar and arithmetic in the Elementary School. The percentage of high grades is high and the percentage of low grades is very low.

TABLE XIII

PERCENTAGE DISTRIBUTION OF GRADES RECEIVED BY GRADUATES OF THE UNIVERSITY ELEMENTARY SCHOOL IN LATER YEARS AS STUDENTS IN THE UNIVERSITY HIGH SCHOOL, IN COMPARISON WITH THE DISTRIBUTION THROUGHOUT THIS HIGH SCHOOL

Percentages in the lower line, U, represent the distribution of grades in the University High School

		E	S	M	I	F
English	E.	15.7	28.1	43.9	12.3	0.0
	U.	7.2	20.2	43.3	24.0	5.3
Latin	E.	24.3	37.1	31.4	7.1	0.0
	U.	14.2	23.8	41.2	17.6	3.1
German	E.	21.5	32.3	35.4	10.7	0.0
	U.	10.7	21.4	50.7	12.3	4.6
History	E.	11.2	27.6	46.6	13.8	0.8
	U.	8.5	20.9	52.3	14.0	3.8
Mathematics	E.	16.8	21.5	55.1	5.6	0.9
	U.	8.5	19.0	52.5	15.8	4.4
Sciences, manual training, etc.	E.	8.1	21.6	58.1	12.1	0.0
	U.	6.7	19.2	64.7	7.3	2.1
Average	E.	16.3	28.7	45.1	10.3	0.3
	U.	9.1	20.7	50.8	15.1	3.9
Median	E.	16.2	27.9	45.3	11.4	0.0
	U.	8.0	20.3	51.5	14.9	4.1

A further inquiry might appropriately be made as to whether those pupils who had most of their grade work in the University Elementary School do better than those who transferred from the traditional schools and had only the upper grade work in the University School. Tables XIV, XV, and XVI show the distribution of high school grades for these one hundred students arranged according to the years spent in the University Elementary School.

TABLE XIV

PERCENTAGE DISTRIBUTION OF GRADES MADE BY FIFTY-FIVE GRADUATES OF THE UNIVERSITY ELEMENTARY SCHOOL ATTENDING THE COLUMBIA CITY HIGH SCHOOL, ARRANGED ACCORDING TO THE TIME AS PUPILS IN THE UNIVERSITY ELEMENTARY SCHOOL

WORK IN U. E. S.	NO. OF PUPILS		E	E & S	S	M	I	I & F	F
VII	11	18	0.8	*24.4*	23.6	44.9	21.6	*30.6*	9.0
VI–VII . .	7								
V–VII . . .	9								
IV–VII . .	4	17	8.6	*38.4*	29.8	41.3	14.6	*20.2*	5.6
III–VII . .	4								
II–VII . . .	1	20	4.7	*46.5*	41.8	39.2	10.9	*14.2*	3.3
I–VII . . .	19								

TABLE XV

PERCENTAGE DISTRIBUTION OF GRADES MADE BY FORTY-FIVE GRADUATES OF THE UNIVERSITY ELEMENTARY SCHOOL ATTENDING THE UNIVERSITY HIGH SCHOOL, ARRANGED ACCORDING TO THE TIME AS PUPILS IN THE UNIVERSITY ELEMENTARY SCHOOL

WORK IN U. E. S.	NO. OF PUPILS		E	E & S	S	M		I & F	F
VII	15	26	11.8	*39.6*	27.8	48.8	10.3	*11.4*	1.1
VI–VII . .	11								
V–VII . . .	6								
IV–VII . .	1	9	22.4	*39.6*	17.2	41.0	19.3	*19.3*	0.0
III–VII . .	2								
II–VII . . .	2	10	20.5	*52.5*	32.0	43.9	3.6	*3.6*	0.0
I–VII . . .	8								

Table XVI consists of a combination of Table XIV and Table XV.

Table XIV shows a marked increase of E and S grades, corresponding with increase of time of pupils in the University Elementary School, and a corresponding decrease of I and F

grades. In Table XV the increase of high grades and the decrease of low grades are not so constant. Although the distribution of grades in the City High School and the University High School do not correspond, Table XIV and Table XV may be reasonably combined into Table XVI. Here the increase of high grades and the decrease of low grades are not constant for each grade, but E and S grades combined show constant increase with increase of time in the University Elementary School, and I and F grades combined show a correspondingly constant decrease. Tables XIV, XV, and XVI seem to supply sufficient evidence to warrant the conclusion that those pupils who take practically all of their grade work in the University Elementary School are better prepared for high school work than those who have a portion of their grade work in the traditional schools.

TABLE XVI

Grades	No. of Pupils	E	E & S	S	M	I	I & F	F
VII VI–VII	44	6.3	*32.0*	25.7	46.8	15.9	*20.9*	5.0
V–VII IV–VII III–VII	26	15.5	*39.0*	23.5	41.2	16.9	*19.7*	2.8
II–VII I–VII	29	12.6	*49.5*	36.9	41.5	7.2	*8.8*	1.6

But it may be objected that those students who had the larger part of their work in the University Elementary School were by nature stronger and ranked higher in the grade work than those who had only the last one, two, or three years in this school. Such *might* be the case. If facts could be presented to show that only those children the more strongly endowed by nature entered the first grade at the University Elementary School, and that the weaker entered

the first grade in public schools and later some transferred to this University School, then it would be quite impossible to conclude, as was done above, that the longer pupils remain in the University Elementary School rather than in the traditional schools, the better able they are to carry the work of the high school. It is clearly impossible to compare these two groups of pupils from their first years of school, as they were enrolled in several distinct systems with no common standard of measurement. It would not be reasonable to presume that the particular twenty-nine pupils who were in the University Elementary School six or seven years, upon entering school at the age of six were favored with more schoolroom ability than the forty-four pupils who entered this school for only the last one or two years. Some of these forty-four pupils came from the rural school, some from village schools, some from distant city schools. These forty-four were probably equal to the twenty-nine in the initial stages of their school work. The forty-four pupils followed the traditional school course for five or six years. The twenty-nine pupils had no direct study of the Three R's and allied subjects. High school records, as presented above, show clearly that these twenty-nine pupils are superior to the forty-four in high school work. This comparison is made upon the basis of these pupils' work in the traditional subjects of the high school. One may interpret these facts to mean that the work of the University Elementary School is more effective in preparation for study in high schools than is the work of the traditional elementary schools.

For explanation of this success in the high school of those who did not have the traditional drill in the grade school subjects, the reader is referred to the latter part of Chapter Eight, where an attempt was made to point out the elements of efficiency. First, the graduates of the University

Elementary School acquire the habit of regarding the various school studies as personal problems; how we help one another, the squirrel as our pet, the grocery store, the meat market, the means of transportation, the post office, the army and navy, the work of the physicians and the nurse, — these community and national problems appeal to the personal interest of the pupils. Such are the problems of real life, outside of school, which appeal to children as well as adults as of personal concern to them. A disposition to study is engendered.

Second, these pupils develop the spirit of initiative. No formal lessons are assigned as specific tasks for the pupils, but large problems are opened to them. Some individual help is given; some assistance is contributed through the irregular conferences which take the place of recitations, but the pupil to a large extent is thrown upon his own resources. He develops much initiative.

Third, the feeling of the problem as personal, and the development of the spirit of initiative contribute much to the pupil's method of study. He has no text to learn and explain. In most of the problems of study in the University Elementary School there are observations to make, information to collect, comparisons to be worked out, conclusions to be reached. Some such methods of studying are acquired in this school and are carried over into high school work.

Fourth, persistency is acquired through the character of the problems studied and the methods of study used. There is in this school no minutely detailed daily schedule. The flexible program given on page 259 shows long and irregular periods of time at the disposal of teacher and pupil. The topics, unlike those in arithmetic, geography, or the like, continue for some days or even weeks. For example in the fall of 1917 the fifth and sixth grades spent nine weeks on the one topic of manufacturing. This involved two and

one half hours on this topic daily. Thus these pupils acquire the habit of working steadily on a problem for considerable time.

Fifth, the work which these pupils do is unlimited. It cannot be said at any time, "the topic is finished." No answers are given at the close of the book. The pupils study so long as they have material appropriate for their work. They leave a piece of work with the desire to return for further study whenever opportunity invites. This tentative attitude toward results has much to do with leading a pupil to do his best.

The success in high school work of the graduates of the University Elementary School is not due to the mere neglect of the traditional formal subjects, but rather to the acquirement of those elements of efficiency which come through normal contact with the problems of real life and which the normal Three R's cannot provide. Success is acquired through so neglecting the traditional work that time is available for more effective studies. These studies are selected to meet the immediate needs and interests of the pupils. These pupils acquire ability to study. They acquire also sufficient control over the traditional formal subjects — usually regarded as fundamental — to enable them to meet requirements in high school work.

BRIEF CRITICISM OF MEASUREMENT IN TERMS OF SCHOOL WORK

Common practice. Earlier traditional examinations and recent standard tests have been used in our schools as means of ascertaining what has been accomplished. The commonly accepted aim of the school, especially the immediate aim, has been the development of ability to read, write, and cipher. Schools have vied with one another in reading words, "spelling down," writing the copy, ciphering in exercises.

So long as this kind of work is the dominant aim in practice, whether it is so in theory or not, so long will it be the custom to test the pupils as to their ability in these school arts.

The wrong thing measured. It was some time after Rice [1] startled and provoked the school world by his claim that he measured the results of teaching spelling by testing the ability of children to spell, before school men recognized that the effectiveness of school work must be measured in terms of results secured. This means of measurement will not probably be questioned now; but the "results" to be measured are decidedly questionable. In recent years there has swept over the country a great demand that schools serve more directly the individual and the community. There is a demand that school aims be identified with society's aims. This calls for a practical education. The curriculum of school arts must yield to a curriculum of life acts. Ability displayed in set tests in reading, writing, spelling, etc., is not the ability really sought as a product of the modern school. In real life we do not read under the direction of a proctor who holds a stop watch; we do not spell words merely for the sake of spelling them. Real life calls upon the modern school to so educate its pupils that they may act efficiently in the varied activities of normal life. To measure a pupil's ability to read words within time limits, and to add columns of numbers with a certain degree of rapidity and accuracy, measures an individual's efficiency in real life only when we know the correlation between efficiency in such reading and adding and efficiency in real life, such as the raising of wheat and voting on election day. The schools and the public are content to measure the ability of pupils in school arts only because they are not yet clearly thinking of the school in terms of life acts.

[1] See *Forum* for April, 1897.

Professor Thorndike proposes a scale for the measurement of ability in reading. Lists of disconnected words are placed before the pupil whose ability is to be measured. The first two of a number of directions are: "Look at each word and write the letter F under every word that means a *flower*. Then look at each word again and write the letter A under every word that means an *animal*." [1] In the lists are found the words, "lily," "pansy," "chrysanthemum," etc. This test is intended as a means of measuring *ability to read*. No effort is made to discover to what extent the child understands, in the course of certain readings, the printed statement, "The pansy has the face of a little fairy." Under normal conditions a first-grade pupil would probably read this statement with understanding and appreciation. But in the method of measurement proposed by Professor Thorndike the child is asked to react to the presence of the word "pansy" by thinking of the relation of this one flower, with which he is acquainted, to a group of plants, with which he has not yet had sufficient experience to enable him to understand the more general term "flower." This test is not measuring the child's real ability to read, but his ability to respond in a particular way to a set exercise, the like of which is not found once in a million cases in real life. The wrong thing is measured.

Wrong purpose in studying and teaching. Current methods of measuring lead pupils and teachers to a wrong purpose in studying and teaching; viz., merely to meet the set standard in competing with others. One of our best-known efficiency experts seemed pleased to report the number of minutes saved in a class by stopping when a certain minimum requirement had been reached. This leads to the assumption on the part of the rank and file of school superintendents and teachers that the curriculum —

[1] *Teachers College Record*, Vol. 15, No. 4, page 3, 1914.

the schoolroom occupation — should consist of the formal exercises in which the tests are given. Standardization in the school arts — yes, even in direction of teachers — is the recent hobby of school leaders. This standardization is not that of the appreciation of historical events, or the judgment of certain social problems, but rather that of the mechanics of reading, writing, and arithmetic. The rank and file of school teachers will endeavor to meet the standard and no more. Then such standardization will have the effect of limiting school work to the mechanics of work, not at all of providing real education.

As a corollary to what has just been stated, it is to be feared that school work is being measured in terms of the school arts in part because data of this sort are comparatively simple and available and thus the problem of measuring is much simplified. In a recent book a well-known author, in his study of efficiency of reading, limits himself to two problems: the rate of reading and the amount retained, as he frankly says, "because these are the elements most easily measured." [1] If scientific method in education must be limited to elements "easily measured," rather than extended to elements worth measuring, such measurement is little less than a travesty upon our scientific movement in education.

MEASUREMENT IN TERMS OF LIFE OUT OF SCHOOL

The thing to be measured. It is almost universally and approvingly admitted that the trend of modern education is toward the practical. This tendency has been given an added impetus by the letters of President Wilson, Herbert Hoover, and Commissioner Claxton, calling upon school officers to give more time and attention in the schools of the country to instruction in the problems of community

[1] Freeman, F. N., *Experimental Education*, page 117.

and national life.[1] Just this viewpoint has been emphasized throughout this volume, especially in Chapters Six, Seven, and Nine. This demand for a schooling more in tune with practical life must lead to a further demand that a pupil's ability in particular activities in community or national life be measured instead of his ability to react to stimuli in formal school exercises. This same demand includes the measurement of the pupil's ability to carry on the work of higher schools. The report, given earlier in this chapter, of the work done by pupils from the University Elementary School in high schools is an illustration of such measurement. The value of the school as a social institution must be measured by its social and industrial service in the community and national life instead of by its activities within the school, isolated from real life. In short, the demand is that measurement be made of the effect of certain schooling upon the boy's ability in the shop, the factory, the office; and also the effect of such schooling upon the boy's behavior as a citizen in the home, in society, and in public places.

Suggestions for measurement. 1. *Measurements of abilities should be made only when such abilities are functioning in normal life.* The truth is, no parent or employer is concerned with the rapidity or accuracy of a boy in set arithmetical tests. The real concern is: How rapid and accurate is the boy in the office? Arithmetical ability of any value is adequately tested only when arithmetical calculation is in use. Only in this way may we measure real values. Ability tested in a formal exercise leaves still the problem of the correlation between formal exercise and normal experience. Present methods of measuring fail to take sufficiently into account the conditions of children put to the test. For example, fourth-grade pupils are tested in ability to recognize words exposed to vision for a fraction

[1] See *Elementary School Journal*, Vol. 18, pages 81–85, 1917.

of a second. The novelty of the experience and the claptrap device for exposing the words put the child in a frame of mind quite different from that in the normal experience of reading. Arithmetical ability measured by a set test and stop watch is not identical with that when the person is at work in the office or shop. Circumstances alter cases. Physical environment and mental attitude have much to do with the ability shown by an individual tested. If we are content to discover an individual's ability to add rapidly and accurately under artificial and formal circumstances, current practice is satisfactory. If we wish to measure ability of an individual to serve in a certain capacity in real life, we must examine that ability in the process of its functioning.

2. *Measurements of abilities should be in terms of normal experience rather than in terms of abstractions from that experience.* The ability of a bank clerk is rated not in terms of arithmetic, but in terms of banking activities. In similar terms citizens rate their grocers, farmers, lawyers, and preachers, and not in arithmetic, reading, or spelling exercises. The public has a right to demand that school tests be in terms of life acts understood by the public. The pedagogue is not long to stand on a pedestal apart from his patrons. School is becoming more closely related to life, and the description of its activities must be more and more in terms of the life that it serves.

3. These measurements may be made with the assistance of parents and of people in social and industrial life. In real life the layman's judgment is accepted at par value. In the educational world it is discounted, only because pedagogical rather than practical measurements are employed. The personal equation may be present, but under normal conditions. The data may be reliable. The method may be strictly scientific. Students of statistics should

apply their methods to experience rather than to school subjects. The problem seems to be essentially this: Thousands of young men and women now in homes, in society, in factories, offices, or other places of business, and in school work as students or teachers should be selected for purposes of measurement for efficiency. Their efficiency judged by employers and citizens should be compared with their efficiency shown as pupils in the lower schools, three, five, eight, or ten years earlier. There would surely be difficulties in securing reliable estimates of efficiency of such people in real life. But that difficulty must be overcome by the student of measurements. There would be difficulties in securing satisfactory terms of expression for such ratings of efficiency. But these difficulties must be overcome. When secured, such correlations between school activities and later activities would be of immense value in discovering individual ability and school efficiency and in linking more closely the school and the community.

4. The influence of such measurements would be: (1) A demand for a more valuable educational content in the school curriculum; a curriculum in terms of life out of school. Any measurement of arithmetical ability, ability in spelling, etc., would be only incidental. If the school were frequently confronted with the question, How efficient are the graduates as clerks, as workmen, or as citizens? school occupation would be more in terms of the occupation of clerks, workmen, or citizens. The student of measurements of educational products has a great opportunity to influence the nature of schoolroom occupation. If he emphasizes the mechanics of the Three R's, he will be working against current tendencies in demands for a school of practical life. If he emphasizes the measurements of activities in real life, he will work in harmony with modern tendencies. (2) A supply of genuine motive on the part of pupils to qualify for the tests

that they must meet in life after school. A motive of this character is greatly needed in modern school work.

Objection answered. It is readily objected that such measurements are too indefinite and inaccurate by reason of the personal equation involved. But just this personal equation is so prominent in real life that to disregard it is to measure only partially the ability in question. There is serious danger that the efficiency expert in education attempt to copy too closely the scientific methods of the efficiency expert in mechanics, and thus insist upon that definiteness and accuracy that admit of verification more for the sake of verification than for social service. Educational problems consist largely of personal elements, which are not yet, if ever, to be defined in terms of mechanics. Educational leaders can afford to be less definite and accurate in their measures of achievement if that achievement is so marked as to be effective in community and national life. This effectiveness is of first concern. The educational expert with his statistical measurements is not to be ruled out, but he is asked to apply his measures to real life, making allowance for indefiniteness and inaccuracy due to the personal equation which can be neither disregarded nor wholly accounted for.

Illustration of this measurement. One illustration of the method of measurement may be given here. The measurement of ability to read has become a problem in recent years. Some of the things we really would like to know about children's readings are: the nature of readings done by them; the amount they read from time to time; the effects of that reading, i.e., how much they retain, what use they make of what they remember, what thoughts or studies are aroused by this reading. Answers to these questions are the measurements wanted by interested parent and citizen. Answers to these questions cannot be secured in a few minutes marked by a stop watch. Some years of watchful

waiting are needed. An account of the leisure reading as conducted in the University Elementary School was given in Chapter Fifteen. Table IX in that chapter shows the number of books read in each of three years in each of seven grades. The original data from which that tabular view is taken show the particular books read by each pupil. Tables XVII and XVIII at the close of this chapter show the books read by five or more pupils in three years and in what grades these books were read.

This list of books shows the character of the reading done. By reference to the original data this list could be reorganized (if an investigator so wished) to show differences in readings done by boys and girls, by the phlegmatic and the sanguine pupils, by those who are above medium in arithmetic and those who are below, by those who have blue eyes and those who have brown. Thus the character and the amount of reading done by individuals or groups can be ascertained and serve as measures of interests and abilities of those doing the reading.

To endeavor to ascertain the effects of such reading upon the boys and girls would be much less definite and thus, to many, much less satisfactory than the measurements suggested for the character and quantity of material read. For what purpose should a boy be expected to retain in memory any information contained in the book, *Dutch Twins?* Merely to meet a formal test would be futile; but to provide material for allusions in conversation would warrant an effort to retain portions of this story. The number of such allusions made might be noted and thus serve as a partial measurement of reading done. How much *Black Beauty* has influenced the thought and action of its readers could be approximately ascertained. Another effect of this reading might well be measured by following up the readings carried on by pupils out of school and after school days

are ended. To what extent leisure time is spent in wholesome reading can be fairly accurately recorded.

Here, then, are some of the measures of real reading — *real* reading, and not the mere recognition of words in set exercises. In the illustration given the individuals are measured as to reading while that reading is normally functioning in their lives. The investigator has measured certain abilities in reading without interrupting the reading and without even letting the pupils know that their reading abilities were being measured. The effects of such measurements would be to emphasize before the public the importance of conducting in school reading appropriate for real life, and not the exercising of the mere art of reading in the school.

If many school systems provided their pupils with the opportunity to read that is provided in the University Elementary School, and if in these school systems records were kept of the reading done, a fairly accurate and very effective measurement of pupils' abilities in (*real*) reading would be made. Moreover, through these measurements there would be collected a quantity of reading material much better adapted to the children's abilities and their interests and much more appropriate for the out-of-school life of the pupils as little citizens.

But such a plan of measurement of reading abilities is impossible so long as the school curriculum so grossly limits school reading to mere exercises in learning to read rather than provides opportunity for reading to learn. The Thorndike and Kelly reading scales are applicable to the traditional work. They are too limited to even touch the reading that is done under normal conditions.

Similarly, arithmetical ability, if that as such is wanted, can be measured by following pupils into stores, shops, factories, and other places of employment, and there taking

into account the arithmetical calculations made as a part of the work. Abilities in geography, spelling, language, etc., may be measured in similar ways. It should be noted, however, that while reading, as considered above, is one of the normal activities [1] of life, arithmetic, spelling, language, etc., are not found in real life at all. While the method of measurement here proposed can be applied to abilities in these traditional subjects, this measurement would tend to find application only in those schoolroom subjects that are identified with life activities out of school.

TABLE XVII

BOOKS READ BY TEN OR MORE PUPILS IN THREE YEARS (1914–1917)

NAME OF BOOK	GRADES						TIMES READ	RANK	No. OF SAME RANK
	I	II	III	IV	V–VI	VII			
Ab, the Cave Man		1	9				10	25	26
Adventures of a Brownie		1	11	5	2	2	20	15	9
Alice in Wonderland		3	7	3		2	15	20	11
American Boy at Henley					4	13	17	18	5
American History Stories			1	6	1	2	10	25	26
Andersen's Best Fairy Tales		3	7	2			12	23	20
Another Fairy Reader		10	3		1		14	21	11
At the Back of the North Wind			1	12	1	3	17	18	7
At the Open Door	1	8	4				13	22	13
Banbury Cross Stories	1	6	5				12	23	20
Bear Stories					2	8	10	25	26
Betty in Canada			1		8	1	10	25	26
Betty Leicester's Christmas				2	2	6	10	25	26
Biography of a Grizzly			3	6	1		10	25	26
Black Beauty			1	4	7		12	23	20
Book of Nature Myths		4	6	13	4		27	8	
Bow-wow and Mew-mew	10	2	1				13	22	13
Boy and Girl Heroes				6	5		11	24	21
Boy Blue and His Friends	8	12	1				21	14	11
Boys of Rincon Ranch			2	7	4		13	22	13

[1] See Chapter Fifteen.

TABLE XVII — *Continued*

Name of Book	Grades						Times Read	Rank	No. of Same Rank
	I	II	III	IV	V–VI	VII			
Brownie Primer	28	9					37	3	2
Brownie's Quest	2	6	7	1			16	19	7
Bunny Boy and Grizzly Bear	3	5	4				12	23	20
Bunny Bright Eyes	7	12	2				21	14	5
Bunny Cottontail, Jr.	1	10	4				15	20	11
Cab and Caboose				2	4	10	16	19	9
Captain June				1	7	2	10	25	26
Cat School	23	7					30	7	2
Cat Stories			3	7	4	10	24	11	3
Cave Boy		4	6				10	25	26
Chats in the Zoo		9	1				10	25	26
Cherry Tree Children	14	8					22	13	2
Children of the Wigwam		2	4	3		7	16	19	9
Christmas Angel			2	4	2	5	13	22	13
Circus Book	1	9	5		1		16	19	9
Circus Reader	9	8					17	18	7
Colonial Days			8	3			11	24	21
Crib and Fly			7	4		2	13	22	13
Dame Wiggins of Lee	14	6					20	15	9
Diddie, Dumps, and Tot			2	1	4	3	10	25	26
Dutch Twins		1	17	11	10	2	41	2	
Eight Cousins			2	2	3	4	11	24	21
Elson Reader, I	9	5					14	21	11
Eskimo Twins		1	10	12	6	3	32	5	
Fairy Book			5	8	2		15	20	11
Fairy Reader	9	14	8	3			34	4	
Far Away Lands			4	6			10	25	26
Fast Mail			1	1	1	8	11	24	21
Fifty Famous People			9	5	1		15	20	11
Five Little Foxes and Other Tales		1	9	1			11	24	21
Following the Ball				3		10	13	22	13
Granny's Wonderful Chair			2	9		1	12	23	20
Grimm's Fairy Tales		9	8	3			20	15	9
Gulliver's Travels		1	8	5		1	15	20	11
Hans the Eskimo			2	9	10	1	22	13	2
Hawk Eye, an Indian Story	3	16	1				20	15	9
Heidi				2	3	5	10	25	26

TABLE XVII — *Continued*

Name of Book	Grades						Times Read	Rank	No. of Same Rank
	I	II	III	IV	V–VI	VII			
Here and There with Paul and Peggy				1	5	5	11	24	21
Holland Stories		2	9	4			15	20	11
Hop o' My Thumb	7	3					10	25	26
Indian Folk Tales			1	3	5	1	10	25	26
Indian Legends			8	7	4	1	20	15	9
In Fableland		8	3				11	24	21
In Texas with Davy Crockett				1	2	8	11	24	21
Irish Twins		1	10	10	9	1	31	6	4
Jack and Jill				1	7	6	14	21	11
Jack and the Bean Stalk	15	8					23	12	2
Jack, the Fire Dog			2	5	1	3	11	24	21
Jack the Giant Killer	2	9					11	24	21
Jan and Betje			1	4	12	2	19	16	7
Japanese Fairy Tales			19	15	16	2	52	1	
Japanese Twins		1	12	8	12	4	37	3	2
Jungle Book			3	1	6	5	15	20	11
Kathleen in Ireland			1	2	5	2	10	25	26
Kristy's Queer Christmas				3	4	4	11	24	21
Legends from the Red Man's Forest			5	7	4		16	19	9
Little Bear	6	13	2				21	14	5
Little Eskimo	1	16	3				20	15	9
Little Folk of Many Lands	1	6	4				11	24	21
Little Girl of Long Ago, A				4	4	4	12	23	20
Little Lord Fauntleroy				5	8	2	15	20	11
Little Men					8	3	11	24	21
Little Princess			3	6	11	11	31	6	4
Little Women				2	12	7	21	14	5
Lives of the Hunted				3	5	4	12	23	20
Lonesomest Doll, The		2	1	3	9	3	18	17	5
Lovey Mary				3	12	5	20	15	9
Magic Forest			1	1	6	6	14	21	11
Manuel in Mexico			1	6	3		10	25	26
Marta in Holland			2	1	5	3	11	24	21
Martha of California				2	5	4	11	24	21
Mary 'n' Mary				3	5	6	14	21	11
Merry Animal Tales		6	10	4	1		21	14	5

TABLE XVII — *Continued*

Name of Book	Grades						Times Read	Rank	No. of Same Rank
	I	II	III	IV	V–VI	VII			
Mewanee, the Little Indian Boy		9	5	2			16	19	9
Miss Muffet's Christmas Party			2	8	2		12	23	20
Moni, the Goat Boy			2	3	2	4	11	24	21
Mother Carey's Chickens				2	4	4	10	25	26
Mother Goose Stories in Prose	9	6	2	1			18	17	5
Mother West Wind's Animal Friends			13	15	2	1	31	6	4
Mother West Wind's Children			13	15	3		31	6	4
Mother West Wind's Neighbors			10	17	3		30	7	2
Mrs. Wiggs of the Cabbage Patch				1	13	4	18	17	5
Mr. Wind and Madam Rain			8	3		1	12	23	20
Old Ballads in Prose			8	5	3		16	19	9
Old Time Tales			1	9	4	1	15	20	11
Outdoor Primer	10						10	25	26
Overall Boys	17	8					25	10	2
Panther Stories				3	4	5	12	23	20
Pappina, the Little Wanderer			2	3	11	3	19	16	7
Paul's Trip with the Moon			10	1			11	24	21
Peter and Polly in Spring	1	8	7	8			24	11	3
Peter and Polly in Summer	1	8	6	2			17	18	7
Peter and Polly in Winter	1	8	5				14	21	11
Peterkin Papers				2	14	9	25	10	2
Pied Piper and Other Stories		5	7				12	23	20
Pig Brother			5	7		1	13	22	13
Pilgrim Stories				1	5	4	10	25	26
Pinocchio			6	13	1		20	15	9
Polly and Dolly	2	12	5				19	16	7
Pollyanna				2	6	5	13	22	13
Pretty Polly Flinders	2	6	2				10	25	26
Progressive Road to Reading, I	9	1	2				12	23	20

TABLE XVII — *Continued*

Name of Book	Grades						Times Read	Rank	No. of Same Rank
	I	II	III	IV	V–VI	VII			
Progressive Road to Reading, II	9	7	2	1			14	21	11
Puss in Boots, Reynard the Fox	4	4					13	21	11
Rafael in Italy				2	6	2	10	25	26
Reading Literature (Primer)	16	1					17	18	7
Reading Literature (First)	9	3					12	23	20
Red Riding Hood, etc.	9	1					10	25	26
Reform of Shaun			3	5	2	3	13	22	13
Reynard the Fox	1	12	2				15	20	11
Robin Hood			2	9	4	4	19	16	7
Robinson Crusoe		10	5	1	1	2	19	16	7
Roly Poly Book	2	11	5	1			19	16	7
Ruth of Boston			2	6	6		14	21	11
Second Brownie Book	1	17	1				19	16	7
Second Fairy Reader	3	11	2				16	19	9
Seventeen Little Bears	5	11	1				17	18	7
Sophie				4	3	5	12	23	20
Stories from Chaucer			1	7	3	1	12	23	20
Stories from the Far East			9	5			14	21	11
Stories Grandmother Told			6	12	6		24	11	3
Stories of American Pioneers			4	3		3	10	25	26
Stories of Indian Days			5	4	3		12	23	20
Stories of Mother Goose Village	2	7	4	1			14	21	11
Story Hour Primer	12						12	23	20
Story Hour Reader, I	9		4				13	22	13
Story Hour Reader, II	1	6	3	1			11	24	21
Story Land		2	6	3			11	24	21
Storyland in Play	8	7					15	20	11
Story of a Donkey			8	12	2	4	26	9	3
Story of Akimakoo			5	5			10	25	26
Story of the Middle Ages						10	10	25	26
Story of Two Kittens	1	7	3				11	24	21
Summers First Reader	12		4	2			18	17	5
Summers Readers, III		2	6	2	1		11	24	21
Sunbonnet Babies in Holland	2	6	6				14	21	11

TABLE XVII — *Continued*

Name of Book	Grades						Times Read	Rank	No. of Same Rank
	I	II	III	IV	V–VI	VII			
Sure Pop and the Safety Scouts			5	5			10	25	26
Tale of Bunny Cotton Tail	12	8	5		1		26	9	3
Things Will Take a Turn				3	8	2	13	22	13
Those Dreadful Mouse Boys		1	10	7			18	17	5
Three Bears	22	1					23	12	2
Three Little Cotton Tails	7	8	2				17	18	7
Three Little Kittens	11		1				12	23	20
Three Pigs	17	3					20	15	9
Tommy Tinker's Book	3	8	5				16	19	9
Tree Dwellers			7	4	1		12	23	20
Twilight Town		9	3				12	23	20
Two Little Confederates				1	6	6	13	22	13
Two Little Indians	12	14					26	9	3

TABLE XVIII

Books Read by Five, Six, Seven, Eight, or Nine Pupils, in Three Years (1914–1917)

These books are ranked with those read ten times or more

Name of Book	Grades						Times Read	Rank	No. of Same Rank
	I	II	III	IV	V–VI	VII			
Adrift on an Ice Pan				2	1	3	6	29	41
Adventures of Mabel				2	5	2	9	26	23
Alice and Tom			1	2	1	2	6	29	41
Among the Farm People			4	2		1	7	28	31
Among the Meadow People			4			1	5	30	43
Animals at Home			4	2			6	29	41
Arabian Nights				2	3	4	9	26	23
Around the World in the Sloop Spray				1		4	5	30	43
Ben the Black Bear			1	1	1	3	6	29	41

TABLE XVIII — *Continued*

Name of Book	Grades						Times Read	Rank	No. of Same Rank
	I	II	III	IV	V–VI	VII			
Big People and Little People of Other Lands			5	2			7	28	31
Birds' Christmas Carol			6	3			9	26	23
Bird Woman of the Lewis and Clark Expedition			3	2			5	30	43
Bonny Prince		3	1	2			6	29	41
Boris in Russia			1	1	3	1	6	29	41
Boy in Eirinn				1	1	5	7	28	31
Boys of the Revolution				1	2	6	9	26	23
Boy with the U. S. Foresters					1	4	5	30	43
Burnham Breaker					1	5	6	29	41
Buz					2	3	5	30	43
Captains Courageous					3	4	7	28	31
Cat-Tails and Other Tales			1	2		2	5	30	43
Child Classics, III			6				6	29	41
Child Life Readers, II		3	4				7	28	31
Child Literature		5					5	30	43
Children of the Cliff		4	5				9	26	23
Children of the Palm Lands		3	2	1			6	29	41
Child's Garden of Verses			6	3			9	26	23
Chinese Fables and Folk Stories			1	3	2		6	29	41
Colliery Jim					4	1	5	30	43
Count Up the Sunny Days				2	4		6	29	41
Dab Kinzer				1	3	3	7	28	31
Dick Whittington, and Other Stories		2	3				5	30	43
Docas, An Indian Boy		3	5	1			9	26	23
Doers			5				5	30	43
Dog of Flanders					1	4	5	30	43
Donald in Scotland				2	3		5	30	43
Early Cave Men			2	4	1		7	29	31
Early Sea People			6	3			9	28	23
East o' the Sun and West o' the Moon		2	6	1			9	26	23
Elson Reader, II	1	8					9	26	23
Elson Reader, III		2	4				6	29	41
Eskimo Stories		3	5				8	27	17

TABLE XVIII — *Continued*

Name of Book	Grades						Times Read	Rank	No. of Same Rank
	I	II	III	IV	V–VI	VII			
Fairy Stories and Fables			6	1			7	28	31
Fairy Tales Every Child Should Know			3	4			7	28	31
First Book of Birds			4		2	1	7	28	31
Fishing and Hunting			7	1			8	27	17
Five Little Peppers			1	2	3	1	7	28	31
Five Little Strangers			5		1		6	29	41
Folk Lore Reader, II	1	4	2				7	28	31
Four American Inventors				1	2	3	6	29	41
Four New York Boys			2	2	3		7	28	31
Fox's Indian Primer		7					7	28	31
Fritz in Germany			1	1	4	2	8	27	17
Gerda in Sweden			1		5		6	29	41
Golden Fluff and Other Stories			1			7	8	27	17
Gold Seeking on the Dalton Trail				1	1	5	7	28	31
Goody Two Shoes			4	4			8	27	17
Hans Brinker				2	1	3	6	29	41
Hassan in Egypt			1		4		5	30	43
Hero Stories from American History				1	2	2	5	30	43
History Stories of Other Lands			5	2		2	9	26	23
Hopi, the Cliff Dweller		6					6	29	41
Horace Mann Reader, II		5	1				6	29	41
Howell's Story Book				6			6	29	41
Howe Readers, III			5				5	30	43
Indian Child Life				5	1	2	8	27	17
In Mythland			5				5	30	43
In the Days of Giants				3	3	1	7	28	31
In the Days of William the Conqueror					5	1	6	29	41
Jack, a Boy in Beast Land			3	2			5	30	43
Japanese Fairy Tales, II				5	1		6	29	41
Japanese Folk Stories				2	1	2	5	30	43
J. Cole				3	1	1	5	30	43
John Halifax, Gentleman					2	3	5	30	43

TABLE XVIII — *Continued*

Name of Book	Grades						Times Read	Rank	No. of Same Rank
	I	II	III	IV	V–VI	VII			
Jo's Boys				1	5	2	8	27	17
Josefa in Spain			3	2			5	30	43
Juan and Juanita				1	5	3	9	26	23
King Arthur and His Knights				2	1	3	6	29	41
King of the Golden River		1	4	2		1	8	27	17
Krag and Johnny Bear				3	1	3	7	28	31
Kwahu, the Hopi Indian Boy			1	5	1	1	8	27	17
Lads and Lassies of Other Days					5	1	6	29	41
Legends of the Red Children			4	3			7	28	31
Legends of Springtime			4	4			8	27	17
Letters from a Cat			2	3		1	6	29	41
Life in the Greenwood			1	1	2	2	6	29	41
Lion and Tiger Stories				1	3	3	7	28	31
Little Colonel				1	7	1	9	26	23
Little Folks of Far Away Lands			4	1			5	30	43
Little Jan the Dutch Boy			4	3			7	28	31
Little Kingdom Primer	3	3					6	29	41
Little Me Too				4	5		9	26	23
Little Mr. Thimblefinger				3	3		6	29	41
Little People of Japan			5	1			6	29	41
Little People of the Snow		4	5				9	26	23
Little Red Hen	6						6	29	41
Little Red Riding Hood	6						6	29	41
Little Smoke				1	2	2	5	30	43
Little Stories of France					2	3	5	30	43
Lodrix, the Lake Dweller		4	5				9	26	23
Marion's Experiences in Germany			1	2		2	5	30	43
Mary Frances' Cook Book				2	2	3	7	28	31
Meadow Sprite and Other Tales			1	2	1	1	5	30	43
Mischief's Thanksgiving			1	3	3	2	9	26	23
Mother Goose Land	8						8	27	17
Mother Goose Primer	4	1					5	30	43
Myths Every Child Should Know			3	3			6	29	41

TABLE XVIII — *Continued*

Name of Book	Grades						Times Read	Rank	No. of Same Rank
	I	II	III	IV	V–VI	VII			
Myths of the Red Children				4	1		5	30	43
Norse Fairy Tales				5	1		6	29	41
Old-Fashioned Fairy Tales	1	5	1				7	28	31
Old World Wonder Stories				8	1		9	26	23
Palmer Cox Brownie Primer	4	1					5	30	43
Philip of Texas			2	6			8	27	17
Playmates Primer	5						5	30	43
Playtime	3	4					7	28	31
Princess and Curdie			1	4	1	3	9	26	23
Progressive Road to Reading, III		1	4				5	30	43
Puss in Boots	2	3					5	30	43
Reading-Literature, II	1	4					5	30	43
Rebecca of Sunnybrook Farm				2	1	6	9	26	23
Rhyme and Story Primer	5	2					7	28	31
Robin Reader	3	5					8	27	17
Rollo in Paris					4	1	5	30	43
Rose in Bloom				2	2	2	6	29	41
Sea Stories for Wonder Eyes			1	1	3		5	30	43
Second Reader			5	1			6	29	41
Secrets of the Woods					3	4	7	28	31
Sinopah, the Indian Boy				1	5	1	7	28	31
Squirrels and Other Fur Bearers			3	3			6	29	41
Stories of Animal Life		1	1	1	2		5	30	43
Stories of Colonial Children			6	1			7	28	31
Stories of Great Americans			4	1			5	30	43
Stories of India				3	1	1	5	30	43
Stories of Indian Children			5				5	30	43
Stories of the United States for Youngest Readers			6				6	29	41
Stories of the United States				6			6	29	41
Stories to Tell to Children			3	3			6	29	41
Story of King Arthur			1	5	1		7	28	31
Story of Little Nell				1	3	1	5	30	43
Story of Wretched Flea			7				7	28	31
Sunbonnet Babies	5	1					6	29	41

TABLE XVIII — *Continued*

Name of Book	Grades						Times Read	Rank	No. of Same Rank
	I	II	III	IV	V–VI	VII			
Swiss Family Robinson				1	2	2	5	30	43
Tales and Plays of Robin Hood			2	2	1		5	30	43
Tales from the Far North			1	4			5	30	43
Thirty More Famous Stories Retold					7		7	28	31
Three Kittens, Chicken Little	9						9	26	23
Through the Looking Glass			5	2	2		9	26	23
Trail to the Woods			1	3		2	6	29	41
Trapper Jim				1	3	3	7	28	31
Treasure Island					3	5	8	27	17
Trixey's Travels			6	3			9	26	23
Two Little Knights of Kentucky					4	4	8	27	17
Two Little Savages					1	5	6	29	41

Some Supplementary Studies

Ayres, L. P. *A Scale for Measuring the Quality of Handwriting of School Children.*

—— *A Scale for the Measurement of Spelling Ability.*

Breed, F. S., and Frostie, F. W. "A Scale for Measuring the General Merit of English Composition in the Sixth Grade." *Educational School Journal*, Vol. XVII, pages 307–325.

Cornman, O. P. *Spelling in the Elementary School.*

Courtis, S. A. *Courtis Standard Practice Tests.*

Freeman, F. N. *Experimental Education.*

Judd, C. H. *Measuring the Work of the Public Schools.*

Kelly, F. J. *The Kansas Silent Reading Tests.*

Meriam, J. L. "Measuring School Work in Terms of Life out of School." *School and Society*, Vol. V, pages 339–342, 1917.

—— "How Well May Pupils be Prepared for High School Work without Studying Arithmetic, Grammar, etc., in the Grades?" *Journal of Educational Psychology*, Vol. VI, pages 361–364, 1915.

MONROE, W. S., DE VOSS, J. C., and KELLY, F. J. *Educational Tests and Measurements.* (See bibliography at close of each chapter for further studies.)

RICE, J. M. *Scientific Management in Education.*

RILEY, J. L. *The Springfield Tests,* 1846–1906.

RUGG, H. O. *Statistical Methods Applied to Education.* (See bibliography at the close for further studies.)

STARCH, D. *Educational Measurements.*

STONE, C. W. *Arithmetical Abilities and Some of the Factors Determining Them.*

TERMAN, L. M. *The Measurement of Intelligence.*

THORNDIKE, E. L. *Educational Psychology.*

—— *Mental and Social Measurements.*

—— "The Measurement of Ability in Reading." *Teachers College Record,* Vol. 15, No. 4, 1914.

WHIPPLE, G. M. *Manual of Mental and Physical Tests.*

IN CONCLUSION

A restatement of the problem of the curriculum. Bobby graduated from the village high school. He soon became a " printers' devil " and in time succeeded in advancing to the position of editor-in-chief.

As is true of most high school graduates, Bobby was quite well trained in the formal exercises found in English grammar, in algebra, in history, in book science. His acquaintance with current problems of community life was limited to that which he had incidentally acquired as a boy about town. His advancement in the printing business was largely due to his industry in this school of real life in which he quite accidentally enrolled.

In the foregoing pages I have tried to portray, briefly, the situation in the traditional schools and the demand by the public that schools function more directly and more efficiently as agencies for social and industrial improvement. I have sought to center attention upon the content of the curriculum, rather than upon the questions of method and management, which seem to me quite subordinate to those of the curriculum. The Three R's, by their very nature, are ill adapted to the needs of an evolutionary society. Social and industrial life is changing rapidly and the demand is insistent that schoolroom employment — the curriculum — be more immediately related to the vocational and leisure activities of the community. In the second place I have endeavored to meet this demand by outlining a course of study for the elementary school in terms of the pupil's present and probable experience in community life. The child must become acquainted with his environment and learn to work. Vocational guidance is found best in industrial intelligence and work aptitudes. He must develop an appreciation of play and acquire an ability to spend well the leisure

time that current civilization provides. This curriculum, a few details of which are presented in Chapter Seventeen, is arranged for the schoolroom, with such excursions into real community life as are possible.

As stated in the Preface, this volume is essentially a report of an experiment carried on during the last decade at the University Elementary School, situated at Columbia, Missouri. Results, so far as yet measured, are presented in Chapter Nineteen. Further tests of the value of this work are contemplated.

A pertinent question. The many visitors at this school, a large number of summer students of education coming directly from the practical field of teaching, and many correspondents have expressed themselves in full agreement with the principles and practices as carried out in this school. But most appropriate is the frequent question: What is the possibility of carrying this plan over into public schools and just how can it be done? I pointed out in Chapter Seven that in a variety of schools there is already evidence of a *tendency* in this direction. Not until many outline studies are published, as represented by those in Chapter Seventeen, can teachers carry out such work to any considerable extent.

Two controlling principles in application. I think it may safely be said that the public is wisely progressive in industrial affairs but ignorantly conservative in educational matters. Industrial, social, and civic affairs receive much more attention in the press than school matters. The public is informed in the one case, and this information is the basis for the progressive attitude. For this reason school changes must be made cautiously and slowly. The would-be school reformer must respect the conservative public, uninformed or misinformed about school conditions and possibilities.

A second principle is this: A given school unit should *adapt* rather than *adopt* principles and practices worked out

elsewhere. There is serious danger in transplanting. Were I to return to public school work, I would not venture to adopt in detail the plan of work which I so ardently carry on in this University School. But much of it can be adapted. I am frequently asked to suggest some details for such adaptation. Space permits me to indicate briefly only two or three points for such adaptation.

Types of adaptation. The daily schedule found in most schools offers one of the best beginning places. The problem is to substitute subject matter found in real life for the formal Three-R subject matter found in the traditional school, and to readjust method and management to correspond. The two principles given above must be in control. The usual daily schedule indicates the time allotments for the various subjects and the order of their appearance in the day's work. Emphasis is almost universally placed upon adherence to the time allotments, that the teacher interested in arithmetic may not slight the training of her pupils in language. The order of arrangement is largely left to the idiosyncrasies of the individual teacher. There seems to be no generally recognized principle to govern the arrangement. One teacher places arithmetic first in the morning because she considers her pupils most alert at that time. Another teacher places arithmetic last of the afternoon classes because she regards this the best means of keeping her pupils awake. In suggesting a modification in the schedule, I can thus be at liberty to change the order, if no great change is made in the time allotments.

Let me use the day's schedule given on page 259 as a representative one in the traditional school. The program rearranged provides for approximately the same average number of minutes each day and indicates a slight readjustment to correspond more nearly with the original schedule.

		Minutes Each Day	Slight Readjustments
9.00– 9.20	Geography	20	Unite by correlation on certain days
9.20– 9.48	History	28	
9.48–10.18	Hygiene — physical ed.	30	Unite by correlation on certain days
10.18–10.30	Science	12	
10.30–10.45	*Recess*	15	
10.45–11.17	Arithmetic	32	
11.17–11.37	Language	20	Unite by correlation on certain days
11.37–11.57	Spelling	20	
Noon			
1.20–1.36	Reference	16	30 Tuesday, Thursday
1.36–1.54	Writing	18	30 Monday, Wednesday, Friday
1.54–2.28	Reading	34	60 daily
2.28–2.53	Literature	25	
2.53–3.05	Art	12	24 alternate days
3.05–3.17	Music	12	

This schedule places what may, for the present, be considered the *content* subjects — geography, history, hygiene, science — early in the day. *Form* subjects — arithmetic, language, spelling, reference, writing — follow. Toward the close of the day are the leisure subjects — reading, literature, art, music.

Let the teacher begin by following this schedule. But an enriched and timely treatment of these four content subjects will soon lead to a normal correlation that practically unites these four subjects into one. I recently observed a teacher using this schedule, in its original form. In the history period she discussed with her class the recent improvements in travel from the Central States to the Pacific States. The *time* schedule cut short an interesting study. The nature of the problem called for a longer time and naturally united these four arbitrarily separated subjects. Recent tendencies to make arithmetic "practical" would readily permit a continuance of this problem of travel on the quantitative level; so also language, spelling, reference

work, writing — all as means of studying the problem of improvement in travel. For a time each division of the study may receive its assigned number of minutes. But erelong it will be discovered that this natural correlation means greater economy, by reason of the normal motivation that governs in this case the more formal work. Teachers are coming to the conclusion that less time is needed to acquire the usual — and even greater — proficiency in the traditional subjects. More normal motivation and more normal conditions of work are needed. On this basis the reference work and writing, for which thirty-four minutes are allowed, may be adequately included in the forenoon. The forenoon schedule is now essentially that suggested on page 269, with games for lower grades indicated on page 384.

The schedule above provides for approximately one hour and a half for what may be called leisure subjects, corresponding with the schedule on page 269. It makes no provision for handwork. This could be provided by lengthening the school day, as provided in the schedule on page 384.

The change in schedule suggested may be made with but little modification of the subject matter itself. The topics selected in the *content* subjects take the lead and provide the occasion for the study of the *formal* subjects. But the suggested change in schedule will encourage the recent tendency to make greater provision in our schools for the study of home, community, and national problems, indicated in the outlines in Chapter Seventeen. Thus this new subject matter gradually — and rather rapidly too — finds a place in the schools without abruptly disturbing the conservatism of the public. This public will welcome the change when it understands the increase in efficiency made.

A change in textbooks used will probably follow. Fewer texts but a much larger number of books will be gradually demanded. Pupils will learn to study more and that more

widely. Texts in the *form* subjects will probably be the first to give way, those in *content* subjects the last to yield. But such a change must be made slowly.

Difficulties not serious. During the past few summers, I have kept a record of the many questions asked by superintendents and teachers as they have observed this work. The difficulties of carrying out such work are not so serious as they at first appear. Nearly twenty years ago Professor Dewey called attention to the conflict between our newer aims and standards and the external conditions under which our traditional work has been carried on. The school man with the least grain of skepticism toward new educational ventures is likely to magnify difficulties because he sees the new work only from the point of view of old conditions. We must be ready to give up our pet methods, devices, bits of equipment, and schemes of management, and be governed by a larger view. Such is the case in meeting new situations in community and national life. The modern school must conform.

APPENDIX A

Leisure Reading Books

1. Books read by a representative boy in grade II in one year

Date taken out		Date returned
Sept. 15	*Work-a-day Doings*	Sept. 24
Sept. 18	*The Brownie Primer*	Sept. 20
Sept. 24	*The Story Reader*	Oct. 6
Oct. 7	*The Circus Reader*	Oct. 26
Oct. 14	*Bunny Cotton-Tail, Jr.*	Oct. 24
Oct. 26	*Bunny Boy and Grizzly Bear*	Nov. 15
Nov. 15	*The Second Brownie Book*	Jan. 12
Jan. 3	*The Cat School*	Jan. 12
Jan. 12	*Puss in Boots, Reynard the Fox*	Jan. 19
Jan. 12	*Dame Wiggins of Lee*	Jan. 14
Jan. 14	*The Nixie Well*	Jan. 18
Jan. 18	*Little Eskimo*	March 2
Jan. 19	*Jack the Giant Killer*	Jan. 24
Jan. 25	*Second Fairy Reader*	March 2
March 3	*Two Little Indians*	March 16
March 9	*In Fableland*	March 10
March 13	*Hawk Eye*	March 13
March 13	*Another Fairy Reader*	April 10
March 17	*Eskimo Stories*	April 10
April 10	*Robinson Crusoe*	April 13
April 13	*Hopi, the Cliff Dweller*	April 14
April 14	*Mewanee, the Little Indian Boy*	April 25
April 23	*The Tale of Bunny Cotton-Tail*	April 25
April 25	*The Book of Nature Myths,*	May 1
April 25	*Fox's Indian Primer*	May 4
May 4	*Bee Martin and Other Tales*	May 11
April 7	*Little Bear*	April 24
May 11	*Overall Boys*	May 17
May 17	*Story Hour Readers,* II	May 20

[1] See Chapter Fifteen for discussion as to the use of these books.

2. REPRESENTATIVE BOOKS SELECTED AT RANDOM FROM SIX LARGER GROUPS FROM WHICH PUPILS IN GRADES III TO VII MAKE SELECTIONS. EACH PUPIL READS AT LEAST TWO BOOKS FROM EACH GROUP WITHIN THE YEAR

GROUP I

Fables, Fairy Tales, Myths, Legends, Wonder Stories, Folk Tales

ÆSOP. *Fables*
ANDERSEN. *Fairy Tales*
MULOCK. *Adventures of a Brownie*
ALLISON. *Sixteen Stories*
TANNER. *Legends of the Red Man's Forest*
WILSON. *Myths of the Red Children*
BALDWIN. *Fairy Stories and Fables*
CARROLL. *Alice in Wonderland*
SWIFT. *Gulliver's Travels*
CARROLL. *Through the Looking Glass*
RUSKIN. *King of the Golden River*
HAWTHORNE. *Three Golden Apples*
MABIE. *Norse Stories*
PRATT. *Legends of Norseland*
GRIFFIS. *Japanese Fairy Stories* (*The Firefly's Lovers*)
KINGSLEY. *Water-Babies*
WILLISTON. *Japanese Fairy Tales*
PRATT. *Stories from Old Germany*
DEFOE. *Robinson Crusoe*
WYSS. *Swiss Family Robinson*
RADFORD. *King Arthur and His Knights*
SMITH. *In the Days of the Giants*
STOCKTON. *Fanciful Tales*
GUERBER. *Myths of Greece and Rome*
BARRIE. *Peter and Wendy*

GROUP II

Nature

BOSTOCK. *The Training of Wild Animals*
CHANDLER. *In the Reign of the Coyote*
KIPLING. *Jungle Books*
SEWELL. *Black Beauty*
LONG. *Good Folk at School*
JOHONNOT. *Neighbors with Claws and Hoofs*
SETON. *Krag and Johnny Bear*
MILLER. *First Book of Birds*
DUTTON. *In Field and Pasture*
CARTER. *Story of Brave Dogs*
LONDON. *The Call of the Wild*
GILMORE. *Birds through the Year*
SCHWARTZ. *Wilderness Babies*
FINCH. *Colliery Jim*
WEED. *Farm Friends and Farm Foes*
BURROUGHS. *Birds and Beasts: Sharp Eyes*
BASKETT. *The Story of the Fishes*
BEARD. *Curious Homes and their Tenants*
JOHONNOT. *Glimpses of the Animate World*
WARNER. *A-Hunting of the Deer* (Riverside)
HOLBROOK. *Book of Nature Myths*
MORLEY. *Butterflies and Bees*
KELLY. *Short Stories of Our Shy Neighbors*
BLANCHAN. *Birds that Hunt and are Hunted*
BLANCHAN. *Birds Every Child Should Know*

GROUP III

Industries, Inventions, Science

DUTTON. *Trading and Exploring*
ILES. *Leading American Inventors*
FOREMAN. *Stories of Useful Inventions*
ST. JOHN. *How Two Boys Made Their Own Electrical Apparatus*
COCHRANE. *The Wonders of Modern Mechanism*
HALE. *Stories of Invention*

LANE. *Industries of Today*
DOUBLEDAY. *Stories of Inventors*
MOWRY. *American Inventions and Inventors*
BRIGHAM. *From Trail to Railway*
JENKS. *Electricity for Young People*
BAKER. *Boys' Book of Inventions*
COLLINS. *The Wireless Man*
WILLIAMS. *How it Works*
BURNS. *The Stories of Great Inventions*
HOWDEN. *The Boys' Book of Steamships*
SLAUSON. *The Motor Boat: Its Selection, Care, and Use*
ROCHELEAU. *Great American Industries — Transportation, etc., Manufactures*
WILLIAMS. *The Wonders of Mechanical Ingenuity*
ADAMS. *Machinery Book for Boys*
PERRY. *Four American Inventors: Fulton, Whitney, Morse, Edison*
MARRIOTT. *Uncle Sam's Business*
CARTER. *When Railroads Were New*
ROLT-WHEELER. *The Boy with the United States Foresters*
DARING. *The Furniture People*

GROUP IV

Character Study — Fiction

HALE. *The Man Without a Country*
HOWELLS. *Boys' Life*
MULOCK. *John Halifax, Gentleman*
DICKENS. *Little Nell*
WIGGIN. *Story of Patsy*
LAMB. *Tales from Shakespeare*
ALCOTT. *Little Women*
KIPLING. *Captains Courageous*
SCOTT. *Quentin Durward; The Talisman*
JOHNSTON. *The Little Colonel*
TROWBRIDGE. *The Kelp-Gatherers*
CANFIELD. *The Boys of Rincon Ranch*

STEVENSON. *Treasure Island*
BURNETT. *Little Princess*
SIDNEY. *Five Little Peppers* (Series)
BARRY. *What Paul Did*
CROCKETT. *The Raiders*
COOPER. *The Deerslayer*
SPYRI. *Heidi*
MARTINEAU. *The Peasant and the Prince*
YOUNG. *When We Were Wee*
DRYSDALE. *The Young Supercargo*
JOHNSTON. *Two Little Knights of Kentucky*
FOSTER. *Mary 'n' Mary*
JACKSON. *Wee Winkles*
TOMLINSON. *The Young Defenders*

GROUP V

Travel, including (1) *Sightseeing,* (2) *Exploration, Adventure,* (3) *Scenery,* (4) *Manners, Customs*

CAMPBELL. *Story of Little Metzu, the Japanese Boy*
PERKINS. *The Japanese Twins*
BOYESEN. *Boyhood in Norway*
KUNG. *Moni, the Goat Boy*
SCHWARTZ. *Five Little Strangers*
MCDONALD AND DALRYMPLE. *Little People Everywhere*
EARLE. *Home Life in Colonial Days*
RAPPOPORT. *Home Life in Russia*
POWERS. *Stories of Indian Days*
MORAN. *Kwahu, the Hopi Indian Boy*
MORRIS. *Home Life in All Lands*
GRIFFIS. *Japan in History*
DAVIS. *Pappina, the Little Wanderer*
DAWSON. *German Life in Town and Country*
PRATT. *Stories of Northern Europe*
CHAMBERLAIN. *How We Travel*
KROUT. *Two Girls in China*
ABBOTT. *Rollo on the Rhine*

WILSON. *Rambles in Colonial Byways*
EARLE. *Stage Coach and Tavern Days*
STARR. *Strange Peoples*
COE. *Our American Neighbors*
GRENFELL. *Adrift on an Ice Pan*
EASTMAN. *Indian Child Life*
OTIS. *Antoine of Oregon*

GROUP VI

History and Biography

EGGLESTON. *Stories of Great Americans for Little Americans*
HALE. *Boy Heroes*
BALDWIN. *Abraham Lincoln*
ANDREWS. *Ten Boys Who Lived on the Road from Long Ago*
PRICE. *Lads and Lassies of Other Days*
TOMLINSON. *Boys of the Revolution*
KINGSLEY. *Four American Explorers*
BURTON. *Four American Patriots*
HEADLEY. *Washington and His Generals*
HAAREN. *Famous Men of the Middle Ages*
BROOKS. *Stories of the Old Bay State*
WHITNEY AND PERRY. *Four American Indians*
NICOLAY. *Boy's Life of U. S. Grant*
MCMURRY. *Pioneers of the Mississippi Valley*
MABIE. *Heroes Every Child Should Know*
GUERBER. *The Story of the English*
TOWNSEND. *Lives of the Presidents*, Vols. I and II (Young People's Library)
WILLIAMS. *Some Successful Americans*
DUTTON. *Little Stories of France*
SCUDDER. *George Washington*
MOORES. *Christopher Columbus for Boys and Girls*
CUSTER. *The Boy General*
EGGLESTON. *Stories of American Life and Adventure*
DUTTON. *Little Stories of England*
LIVINGSTONE. *Glimpses of Pioneer Life. Our Holidays* (Retold from *St. Nicholas*)

APPENDIX B

List of Books Referred to in Observation Studies in Grade I

(This list is representative of books used in Grade II)

Aldine Readers, I, II
Alger. *Primer of Work and Play*
Alexander. *Child Classics Primer*
Art Literature Reader, I and II
Arnold Primer
Atwater. *Stories from the Poets*

Bailey. *The Children's Hour*
Bailey. *Firelight Stories*
Bailey and Ehrman. *Songs of Happiness*
Bailey and Lewis. *For the Children's Hour*
Baker's Action Primer
Baldwin. *Fairy Reader*
Baldwin. *Fairy Stories and Fables*
Baldwin and Bender. *Readers*, I, II
Bass. *Animal Life*
Bass. *Plant Life*
Beebe. *Picture Primer*
Beebe and Kingsley. *The First Year Nature Reader*
Beeson. *Child's Calendar Beautiful*
Bible
Bigham. *Stories of Mother Goose Village*
Blaisdell. *Cherry Tree Children*
Blanchan. *Birds that Hunt and are Hunted*
Blanchan. *Eastern Birds Every Child Should Know*
Blodgett. *First Reader*
Boyle. *Outdoor Secrets*
Braden. *A Little Book of Well-known Toys*
Brooks' First Reader
Brown. *Plant Baby and Its Friends*
Brown. *Stories of Woods and Fields*
Bryant. *How to Tell Stories to Children*

BRYANT. *Poetry of Flowerland*
BRYANT. *Stories to Tell to Children*
BUCKINGHAM. *Songs for Children*
BURROUGHS. *Squirrels and Other Fur-Bearers*

CARPENTER. *Work That is Play*
Carroll and Brooks Reader
CHASE. *Friends of the Fields*
CHASE. *Plant Babies and Their Cradles*
CHASE. *Some of Our Flower Friends*
CHASE. *Stories from Animal Land*
CHASE. *Stories of Birdland*
Child Classics, III
Child Life Reader, I, II
Child Literature, I, II
CHRISTY AND SHAW. *Pathways in Nature and Literature*
CLYDE AND WALLACE. *Through the Year*
COE. *The First Book of Stories for the Story Teller*
COE. *The Second Book of Stories*
CONANT. *The Children's Year*
Cyr's Graded Art Readers, I
Cyr's Readers, II, III

DANA. *How to Know Wild Flowers*
DAVIS. *Nature Stories for Youngest Readers*
DODGE. *Rhymes and Jingles*
DODGE. *When Life is Young*

EDDY. *Friends and Helpers*
ELDRIDGE. *A Child's Reader in Verse*
ELIOT. *Poetry for Children*
ELSON. *Primary School Reader*, I, II, III

FIELD. *Love Songs of Childhood*
FORD. *Nature's Byways*
FOULKE. *Twilight Stories*

GALBERT. *The Expression Primer*
GARDNER. *Work That Is Play*

GAYNOR. *Songs and Scissors*
GAYNOR. *Songs of the Child World*, I
GEORGE. *Songs in Season*
GORDON. *Readers I, II*
Graded Classics, II
Graded Literature Readers, II
Graded Poetry, IV
GRIEL. *Glimpses of Nature for Little Folks*
GROVER. *Outdoor Primer*
GROVER. *Folklore Stories*
GROVER. *Magnolia Primer*

HALIBURTON. *Playmates*
HAMMETT AND COMPANY. *Boston Collection of Kindergarten Stories*
HARRIS. *Uncle Remus: The Rabbit and the Tar Baby*
HAZARD. *Three Years with the Poets*
Heart of Oak Readers, I and II
HEATH. *Readers*, I, II
Hiawatha Primer
HICKS. *Nature and History Stories*
HOLBROOK. *The Book of Nature Myths*
HOLBROOK. *Dramatic Reader for Lower Grades*
Holton Primer
Holton-Curry Readers, I, II
HORSFORD. *Stories of Our Holidays*
HOUGHTON MIFFLIN COMPANY. *Beginner's Primer*, I
HOUGHTON MIFFLIN COMPANY. *Verse and Prose for Beginners*
HOWARD. *Dick Whittington and Other Stories*
Howe Primer, I
Howell's Story Book
HOWLISTON. *Cat Tails and Other Tales*
HOXIE. *A Kindergarten Story Book*

JENKS AND RUST. *Song Echoes from Childland*
JENKS AND WALKER. *Songs and Games for Little Ones*
Jones Readers, I, II, III

KELLY. *Introduction to Leaves from Nature's Study Book*
KELLY. *Short Stories of Our Shy Neighbors*

Ketchum and Rice. *Our Story Reader*
Keyes. *Stories and Story Telling*
Klingensmith. *Household Stories for Little Readers*
Knowlton. *Nature Songs for Children*

Lane. *Stories for Children*
Lange. *How to Know the Wild Birds of Missouri*
Language Reader, I, II
Lights to Literature, I, II
Lindsay. *Mother Stories*
Little Kingdom Reader, Primer, I
Logie and Uecke. *The Story Reader*
Lovejoy. *Nature in Verse*
Lucas. *A Book of Verses for Children*
Lucia. *Peter and Polly*

Mabie. *Fairy Tales Every Child Should Know*
McCullough. *Little Stories for Little People*
McMahon. *Rhyme and Story Primer*
McMurry. *Classic Stories for Little Ones*
McMurry and Cook. *Songs of the Tree Top and Meadow*
Merrill Readers, I and II
Miessner and Fox. *Art Song Cycles*
Miller. *First Book of Birds*
Miller. *True Bird Stories*
Milton Bradley Company. *Half a Hundred Stories*
Morse Reader, I
Moses. *Rhythmic Action Plays and Dances*
Mother Goose
Murray. *Storyland*
Murray. *Wide Awake Primer*, I

Nash. *Æsop and Mother Goose*
Neidlinger. *Small Songs for Small Singers*
Nelson. *Science Readers*, I, II
New Century Readers, I, II
New Sloan Reader, I, II

O'Grady and Throop. *The Teacher's Story Teller's Book*
Olcott. *Good Stories for Great Holidays*
O'Shea. *Six Nursery Classics*
O'Shea. *The Tales of Mother Goose*

Parker. *Our Friends the Birds*
Pierson. *Among the Farmyard People*
Pierson. *Among the Forest People*
Pierson. *Among the Meadow People*
Potter. *The Story of Peter Rabbit*
Poulsson. *Finger Plays*
Poulsson. *Holiday Songs*
Poulsson. *In the Child's World*
Poulsson and Smith. *Songs of a Little Child's Day*
Pratt. *Legends of the Red Children*
Pratt. *Little Flower Folks*
Progressive Road to Reading, I, II

Reading Literature Readers, Primer I, II
Rich. *The Singing Leaves*
Riley and Gaynor. *Lilts and Lyrics*
Riley and Gaynor. *Playtime Songs*
Riley and Gaynor. *Songs of the Child World*
Riverside Readers, Primer, I, II
Robinson. *At the Open Door*
Robinson. *Skyward and Back*
Rossetti. *Poems for Children*

Seegmiller. *Little Rhymes for Little Readers*
Sharp. *The Fall of the Year*
Sherman. *Little Folk Lyrics*
Silver Song Series, I
Simms. *Child Literature*
Skinner. *Dramatic Stories*
Skinner and Lawrence. *Little Dramas*
Sneath, Hodges, Stevens. *The Golden Ladder*
Smith, E. *Modern Music Series*, Primer, I
Smith, E. *Songs for Little Children*, II

Sprague Classic Readers, I, II, III
Standard Catholic Reader, II
STARK. *Wild Flowers Every Child Should Know*
Stepping Stones to Literature Reader, II
STEVENSON. *A Child's Garden of Verses*
STICKNEY. *Earth and Sky*, I, II
STICKNEY. *Pets and Companions*
STOKES. *Ten Common Trees*
Story Hour Reader, I, II
STRONG. *All the Year Round*
SUMMERS. *Reader*, Primer, I, II
SUMMERS. *Thought Reader*, I

TAYLOR. *Rhymes for Children*
THAXTER. *Stories and Poems for Children*
TOWER. *Gold Nuggets of Literature*
TROEGER. *Harold's First Discoveries*, I
TROEGER. *Nature Study Readers*, I, II
TURNER. *Easy Stories*
TURNER. *Our Common Friends and Foes*
TURNER. *Short Stories*
TURNER. *Stories for Young Children*
TURPIN. *Classic Fables*
TURPIN. *Rose Primer*

VARNEY. *The Robin Reader*
VARNEY. *Story Plays, Old and New* I, II

WARREN. *Nature from September to June*
WILSON. *Nature Study*, I, II
WOOD. *Children's First Story Book*

APPENDIX C

List of Books Used in the Study of Transportation

(Grade VI)

Adams. *Harper's Machinery Book for Boys*
American Poets
Arabian Nights, Sinbad's Voyage
Ashley. *American Government*

Badlam. *Views in Africa*
Baker. *Boys' Book of Inventors*
Baker. *Boys' Second Book of Inventions*
Beach Patrol
Blaich. *Three Industrial Nations*
Bogart. *Economic History of the United States*
Bourne and Benton. *Introductory American History*
Brigham. *From Trail to Railway*
Burton. *New Era United States History*

Carpenter's Geographical Readers
Carroll. *Around the World*, II, IV, V
Carter. *When Railroads Were New*
Chamberlain. *How We Travel*
Child Life Readers
Clark. *The Government*
Cochrane. *The Wonders of Modern Mechanism*
Cochrane. *Romance of Industry and Invention*
Coman. *Industrial History of the United States*
Cooper. *Animal Life in Sea and on Land*

Defoe. *Robinson Crusoe*
Doubleday. *Stories of Inventors*
Dryer. *High School Geography*
Dunn. *The Community and the Citizen*

Earle. *Stage Coach and Tavern Days*

Garnett. *Navigable Rivers of the United States*
George. *China and Japan*

Graded Literature Reader, IV
Graded Poetry, III
Great American Industries, Transportation
GUERBER. *The Story of the English*
GUITTEAU. *Preparing for Citizenship*

HALL. *The Boy Craftsman*
Heath Reader, IV, V
Highroads of Geography, IV, V
HOWDEN. *The Boys' Book of Steamships*

JAMES AND SANFORD. *Our Government*
JOHNSON. *American Railway Transportation*
JOHNSON. *Elements of Transportation*
JOHNSON. *Ocean and Inland Water Transportation*

Kathleen in Ireland
King's Advanced Geography
King's Geographical Readers, II, III, V
KROUT. *Two Girls in China*
KNOX. *Boy Travelers: Great Britain; Russia; Southern Europe*

Mace's School History of the United States
MARRIOTT. *How Americans are Governed*
MARWICK AND SMITH. *The South American Republics*
MAULE. *The Boy's Book of New Inventions*
MCDONALD. *Manuel in Mexico*
MONTGOMERY. *English History*
MOORE. *Industrial History of the American People*
MORRIS. *Home Life in All Lands*, II
MORTON. *Navigation for the Amateur*
Morton's Advanced Geography
MOSES. *The Government of the United States*
MOWRY. *American Inventions and Inventors*
Murché's Science Readers, IV and V

Natural Advanced Geography
NIDA. *City, State, and Nation*

PARKER. *Information Reader*
PARTON. *Captains of Industry*
PIERCY. *Great Inventions and Discoveries*
Popular Science Reader

RAPPOPORT. *Home Life in Russia*
REDWAY. *Commercial Geography*
ROCHELEAU. *Geography of Commerce and Industry*
ROCHELEAU. *Geography of Commerce*
RODDY. *Geography*
Romance of Industry and Invention

SEABURY. *Porto Rico*
Series. *Strange Lands Near Home*
Series. *Toward the Rising Sun — Under Sunny Skies*
Series. *The Wide World*
SLAUSON. *The Motor Boat: Its Selection, Care, and Use*
SMITH. *Commercial and Industrial Geography*
SPEARS. *The Story of the American Merchant Marine*
Stepping Stones to Literature, V, VI
Stories of India
Stories of Indians, I, 132. *The Building of the Ship*

Tarr and McMurry Geography, II
Tarr and McMurry Geography, III
THOMAS. *An Elementary History of the United States*
Travels in the East
TROEGER. *Nature Study Reader*, IV
TROTTER. *Geography of Commerce*
Trotter Geography, 137. *Picture of Soo Locks;* also see Index
Two Chinese Girls

Uncle Robert's Geography, IV

VANBERGEN. *Story of Japan*

WARMAN. *The Story of the Railroad*
WILLETS. *Workers of the Nation*, I, II

WILLIAMS. *How It Works*
WILLIAMS. *The United States Navy*
WILLIAMS. *The Wonders of Mechanical Ingenuity*
WILLIAMS. *How It Is Made*
WILLIAMS. *The Wonders of the Modern Railway*
Wide World
World's Progress
World and Its People, Asia
WRIGHT. *Industrial Evolution of the United States*

APPENDIX D

Representative List of Songs Used

(Grades I to III)

SONG	NAME OF BOOK	PAGE
September	*Song Echoes from Child Land*	42
A Dewdrop	*E. Smith Primer*	85
Morning Glory	*E. Smith Primer*	74
The Crow	*Songs About Birds*	40
The Leaves' Party	*Songs About Birds*	64
Good Morning	*Songs of Happiness*	77
Why Mr. Gobbler Changed His Tune	*Songs of Child World*, II	70
Jack Frost	*Songs of Child World*, I	68
Morning Greeting	*Songs of Child World*, I	112
The Raindrops	*Songs of Happiness*	18
The Little New Year	*Songs and Games for Little Ones*	55
Good Morning, New Day	*Songs and Games for Little Ones*	81
Baa-Baa! Black Sheep	*Lilts and Lyrics*	1
Hickory Dickory Dock	*Lilts and Lyrics*	14
Little Jack Horner	*Lilts and Lyrics*	14
How Many Miles to Babylon	*Lilts and Lyrics*	3
Little Friends	*Nature Songs for Children*	77
The Snowbird	*Nature Songs for Children*	42
Mistress Mary	*Lilts and Lyrics*	12
Little Maid Pretty Maid	*Lilts and Lyrics*	4
Hey-Diddle-Diddle	*Lilts and Lyrics*	8
The Gingerbread Man	*Playtime Songs*	24
Tick-Tock	*Small Songs for Small Singers*	54
Little Pussy Willow	*Songs for Children*	14
The Child and the Star	*Songs for Little Children, for Kindergarten and Primary Schools*	70
Indian	*Songs in Season*	84
Easter Carol	*Song Echoes from Child Land*	14
Daffy-Down-Dilly	*Songs of Child World*	81
The Blue Bird	*Songs about Birds*	9

SONG	NAME OF BOOK	PAGE
The Whip-poor-will	*Songs about Birds*	25
The Red-Headed Woodpecker	*Songs about Birds*	26
The Blue-Jay	*Songs about Birds*	30
Swinging	*The Art Literature Reader*, II	148
Violet	*Songs of the Child World*, I	80
Bird Songs	*Songs about Birds*	

Grades IV to VII

Unfurl the Starry Flag	*Rix Assembly Song Book*	16
Blacksmith	*Songs of Child World*, No. I	16
September	*Plan Book, Autumn*	
Bob White	*Songs in Season*	31
Star Spangled Banner	*School Praise and Song*	102
The Brownie	*Lilts and Lyrics*	52
The Brownies	*Songs of the Child World*	102
Thanksgiving	*Lilts and Lyrics*	28
Swinging	*Sheet Music*	
Thanksgiving Hymn	*Songs of Happiness*	58
Thanksgiving Song	*Songs of Child World*, I	67
Autumn	*Songs of Child World*, II	10
Song of Loaf of Bread	*Songs of Child World*, I	15
Birds in the Night	*Songs Every One Should Know*	64
The Blacksmith	*Songs of Child World*, I	16
Coasting	*Songs of Child World*, II	14
Skating	*Songs of Child World*, II	16
Maryland, My Maryland	*Patriotic Songs*	22
Song of Iron	*Songs of Child World*, I	14
Little Boy Blue	*Songs by Eugene Field*	65
Voices of the Woods	*School Praise and Song*	147
The World's Full of Beauty	*School Praise and Song*	129

All Grades Together

America		
Sweet Summer's Gone Away	*Songs in Season*	65
Swinging	*Songs in Season*	42
Leaves' Party	*Songs of Child World*	64
The Brownie	*Lilts and Lyrics*	52

SONG	NAME OF BOOK	PAGE
The Brownies	*Songs of Child World*, I	102
Swinging	*Sheet Music*	
Thanksgiving Hymn	*Songs of Happiness*	58
Thanksgiving	*Lilts and Lyrics*	28
Thanksgiving Song	*Songs of Child World*, I	67
Birds in the Night	*Songs Everyone Should Know*	64
Winding the Clock	*Songs of Child World*, I	100
Shine Out, Oh Blessed Star	*Songs and Games for Little Ones*	63
Merry Christmas Bells	*Songs and Games for Little Ones*	69
Christmas Carol	*Lilts and Lyrics*	29
The Chickadee	*Songs of Happiness*	50
A Day	*Nature Songs for Children*	82
Sleighing Song	*Songs of Child World*, I	70
Sailor Song	*Songs of Child World*, I	50
The Flag	*Songs of Happiness*	70
A Recipe for a Valentine	*Songs of Child World*, I	93
Patriotic Hymn	*Nature Songs for Children*	102
The Kite	*Songs of Happiness*	91
What Robin Told Me	*Nature Songs for Children*	38
It Is Spring	*Nature Songs for Children*	84
Rollicking Robin	*Nature Songs for Children*	48
Spring Rain	*Songs for Little Children*	76
Mr. Wind and Madam Rain	*Songs of Child World*, II	12
The Blue Bird	*Songs in Season*	28
The Slumber Boat	*Playtime Songs*	14
Easter Carol	*Song Echoes from Child Land*	14
Daffy-Down-Dilly	*Songs of the Child World*	81
Little Green Frog	*Playtime Songs*	60
Trillium	*Art Song Cycles*, II	39
Jack-in-the-Pulpit	*Art Song Cycles*, II	32
Violet	*Art Song Cycles*, II	29
Dandelion	*Songs of Child World*, I	78
The Snail	*Songs in Season*	134
Wild Roses	*Art Song Cycles*, II	36
Mother Goose Songs	*Lilts and Lyrics*	
	Mother Goose Melodies	

APPENDIX E

Representative List of Folk Dances

Grades I, II, III

DANCE	BOOK	PAGE
Shoemakers' Dance	Crampton	3
Chimes of Dunkirk	Crampton	1
Danish Dance of Greeting	Crampton	2
Children's Polka	Crampton	4
German Clap Dance	Crampton	45
Swedish Clap Dance	Crampton	13
Ace of Diamonds	Crampton	25
Virginia Reel[1]	Mari Hofer	24
Lads and Lassies	Mari Hofer	41
Pop Goes the Weasel	Harmony Tablet	
Bean Porridge Hot	Harrington and Farwell	
To Market, To Market	Harrington and Farwell	
Ride a Cock Horse	Harrington and Farwell	
Three Crows	Harrington and Farwell	
Hot Cross Buns	Harrington and Farwell	
English Harvester's Dance	Crampton	3
Norwegian Mountain March	Crampton	4
I See You	Crampton	42
The Pigeon House	Pederson and Boyd	25
A Moonlight Walk	Pederson and Boyd	32

Grades IV and V

Lassies' Dance	Crampton	11
Swedish Clap Dance	Crampton	13
Irish Jig	Crampton	52
Hopp Mor Annika	Crampton	22
German Clap Dance	Crampton	45
Tantoli	Crampton	10
How-do-you-do	Gilbert, American School of Dancing, Boston	
Irish Lilt	Irish Wash Woman	

[1] Any lively 4–4 time will do for this.

DANCE	BOOK	PAGE
Hungarian Peasant Dance	HARMONY TABLET	
Pop Goes the Weasel	HARMONY TABLET	
Ride a Cock Horse	HARRINGTON AND FARWELL	
Hot Cross Buns	HARRINGTON AND FARWELL	
Swedish Schottische	HARMONY TABLET (Girls)	
Norwegian Mountain March	CRAMPTON	18
To Market, To Market	HARRINGTON AND FARWELL	
Bro Bro Breda	PEDERSON AND BOYD	10
A Moonlight Walk	PEDERSON AND BOYD	32
Bounding Heart	CRAWFORD	6
Gustaf's Health	CRAWFORD	34
Salutation Dance	CRAWFORD	39
Highland Schottische	CRAWFORD	42
Reap the Flax	CRAMPTON	56

Grades VI, VII, and VIII

Vineyard (Sheet Music)	CRAMPTON	11
Dutch Dance	HARMONY TABLET	
Tyrolinne Dance	HARMONY TABLET	
Hungarian Peasant Dance	HARMONY TABLET	
Swedish Schottische	HARMONY TABLET	
Irish Lilt (Irish Wash Woman)	HARMONY TABLET	
Irish Jig	CRAMPTON	52
Highland Schottische	CRAMPTON	20
Hopp Mor Annika	CRAMPTON	22
German Clap Dance	CRAMPTON	45
Swedish Clap Dance	CRAMPTON	13
Nickodickomdij	CRAMPTON	47
Minuet (Beethoven Minuet)		
Norwegian Mountain March	CRAMPTON	18
Gossiping Ella	CRAWFORD	4
Bounding Heart	CRAWFORD	6
Bleking	CRAWFORD	20
Lottie Is Dead	CRAWFORD	24
Hark, Hark, the Dogs do Bark	HARRINGTON AND FARWELL	2
Tarantella	BURCHENAL	82

Folk-Dance Books

Burchenal. *Folk Dances and Games.* A. S. Barnes Company.
Crampton. *The Folk-Dance Book.* A. S. Barnes Company.
Crawford. *Folk Dances and Games.* A. S. Barnes Company.
Harmony Tablet.
Harrington and Farwell. *Nursery Rhyme Dances,* I and II. Carl F. Ludwig.
Hofer, Mari. *Popular Folk Games and Dances.* A. Flanagan Company.
Pederson and Boyd. *Folk Games and Gymnastic Play.* Saul Brothers.

APPENDIX F

Representative Games

EXCERPT FROM DESCRIPTIONS OF GAMES USED IN THE UNIVERSITY ELEMENTARY SCHOOL. THE BEAN-BAG GAME IS REPRESENTATIVE OF INDOOR GAMES FOR GRADES I, II, III. THE "VARIATIONS" DESCRIBED INDICATE THE POSSIBILITIES OF THE GAME.

Bean Bags (Circles on the floor).

Apparatus. The bags should be about 7 inches by 7 inches and contain about one pound of smooth beans. Pleasure in the game is increased if the bags are of various but harmonious colors. They may be ornamented by butterfly, bird, arrow, target, etc., worked in silk or yarn.

Variations

(One circle on the floor)

1. A given distance between circle and toe-line for beginning players — e.g., in the first grade — the circle should be about two feet in diameter. The toe-line may well be about 5 feet from the circumference of the circle. Let each player toss from three to six bags. With the single circle the simplest and normal count would be one for each bag *within* the circumference. There is here only counting to be done. Simple addition may be involved in combining the scores at the close. Counting, however, should be the process until the pupils quite incidentally discover the shorter process — addition. (Teachers will be quite liable to expect a second modification to be the increase of the count per bag; e.g., 2, 3, 4, etc. This would be natural in teaching "number," but there is no call for this by the nature of the game itself. There is no reason for scoring 2 for a bag which under the very same conditions counted 1 before. Change in the numbers used must be due to change in the nature of the game. True, some children will find certain increased pleasure in using the count 3 instead of 1. This is wholly due to a feigned interest in numbers, probably given them by parents or

elders. Such counts could be allowed for a time under such conditions.)

2. Change the distance between the circles and the toe-line. Increase in distance should increase the score for any bag tossed into the circle. There is, however, no occasion for this increase in score if all the players play from the same toe-line. Difference in score should be allowed when difference in distance is at the option of the player; e.g., at a distance of 4 feet, a score of 1; at 5 feet, 2; at 6 feet, 3; etc. (The amount of variation in distance and the score admits of considerable study if any one finds it important in the interest of the game.)

(Two concentric circles)

It is clearly more difficult to land a bag in the inner-smaller circle. More credit should be allowed. The simplest case will be to allow two for the inner circle and one for the outer. But it is questionable if *twice* the skill is needed for the inner circle. A less difference in skill is indicated by numbers of relatively less difference; e.g., 3 and 4 respectively. Pupils even in the second grade will discover this; and thus from this point — whenever it occurs — we must allow pupils to use various values, but we must not be too particular as to the exactness in relation between numbers used and skill represented.

3. Inner circle 2, outer circle 1.

4. Inner circle 4, outer circle 3.

(It would be out of place to use here 4 and 2 respectively. No advance is made over No. 3.)

5. Inner circle 12, outer circle 5.

(The relationship here is largely guesswork, and pupils should be allowed to select numbers according to their whims on these conditions:

(1) If the majority agree, and the minority makes not too much objection.

(2) If the numbers approach appropriate relationship to skill required.

(3) If pupils can use such numbers or learn fairly well at that time to use them.)

NOTE. Teachers must be cautioned at this place not to insist upon selection of numbers according to any logic of numbers. The game would surely be spoiled. *The game is first* — numbers merely serve in increasing the fun and possibilities of the game.

6. Special count for the bull's-eye: An arbitrary extra credit may be allowed each bag lying over the center of the circles.

NOTE. Up to this point *generosity* on the part of the players has established the custom of counting a bag *touching* the circumference of the circle as *outside* of that circle. But when using concentric circles, a bag lying *on* the circumference of the inner circle is clearly of more value than one wholly outside of that line. Pupils develop in such competitive games a desire to be more accurate in being fair. Thus in the use of two concentric circles a bag on the circumference of the circle is worth the value of the outer circle *and* also approximately one half the difference between the values of the two circles.

Thus:

7. One half the difference between the two values may be added to the value of the outer circle, for any bag lying *on* the circumference of the inner circle.

NOTE. It is probable that a desire to be so accurate in measuring competing skill will not appear in the pupils until the third grade. It may well be introduced, however, at any time such interest is expressed.

It will readily be noted that this fractional relationship may become more complicated. For example, if the bag rests three fourths over the inner circle, three fourths instead of one half of the difference may be used. There is of course the danger here that fractions will be used at the expense of the game. Teachers who wish to emphasize arithmetic can take advantage of this situation. It is probable however that the fraction will be used only in one or two plays. An integral value will then be substituted; e.g., one half the difference between eight and six would be one and thus a bag on the circumference would count seven and thereafter be thought of as such.

With three or more concentric circles the game becomes more complicated. So also under other modifications possible. The real

fun in the game may then pass to the complications possible. This is perfectly legitimate for pupils more advanced and capable of meeting such situations.

Thus:

Varied complications: Bean bags may be used in various ways other than with circles on the floor and such variations may be listed here.

8. Through a hoop: A hoop of approximately one foot in diameter is held in a vertical position by one or two pupils. At a distance of from 4 to 10 feet (depending upon the strength and skill of the players) the toe-line is drawn. The players toss the bags through the hoop. Considerable muscular movement and control are here called in play and thus the fun is increased.

Modifications of this No. 8 may also be readily made; for example:

(1) Varying distances of the toe-line give pupils a chance to select a closer range at lower count or a wider range at a higher count. This should be allowed pupils as individuals wish, even changing their choice in consecutive plays.

(2) The number of bean bags may change.

(3) A catcher may stand behind the hoop. This catcher may be chosen by the player as his partner and an extra count allowed the player for each bag caught.

Note. In such a game, the more pupils participating, the better. More pupils are occupied, the progress of the game is quickened, and thus interest and fun are increased.

9. Into the basket: An ordinary waste basket may be used. Distances of the toe-line may vary the amount of the counts as indicated in "variations" above.

10. The oblique board: A square or oblong board, with square or round openings, of various sizes may be placed in an oblique position on the floor as a target. The counts vary inversely as the size of the holes through which the bean bags fall. Counts may vary also as the distances of the toe-line from the board.

11. Squares or circles: Let squares or circles of various sizes be drawn near the center of the room. The arrangement is not important. Assign values inversely as the size. A circle or square surrounding the various squares or circles will serve as a toe-line. This line should be at a suitable distance. Players are free to choose such a place on the toe-line as will insure them the best count.

NOTE. This game admits of many other variations which are being developed at the University Elementary School.

BIBLIOGRAPHY [1]

ADAMS, JOHN. *Primer on Teaching.* T. & T. Clark, Edinburgh, Scotland.

ADDAMS, JANE. *Democracy and Social Ethics.* The Macmillan Company, 1913.

—— *Newer Ideals of Peace.* The Macmillan Company, 1911.

—— *The Spirit of Youth and the City Streets.* The Macmillan Company, 1910.

ALDERMAN, L. R. *School Credit for Home Work.* Houghton Mifflin Company, 1915.

ARNOLD, SARAH L. *Reading: How to Teach It.* Silver, Burdett & Co., 1899.

AYRES, L. P. *Laggards in Our Schools.* Russell Sage Foundation, 1909.

—— *A Scale for Measuring the Quality of Handwriting of School Children.* Russell Sage Foundation, 1915.

—— *A Measuring Scale for Ability in Spelling.* Russell Sage Foundation, 1915.

BACHMAN, F. P. *Problems in Elementary School Administration.* World Book Company, 1916.

BAGLEY, W. C. *Classroom Management.* The Macmillan Company, 1907.

—— *Educational Values.* The Macmillan Company, 1911.

—— *The Educative Process.* The Macmillan Company, 1905.

BAILEY, L. H. *The Nature-Study Idea.* Doubleday, Page & Co., 1904.

BALDWIN, J. M. *Social and Ethical Interpretations in Mental Development.* The Macmillan Company, 1899.

—— *Mental Development in the Child and Race.* The Macmillan Company, 1895.

BALDWIN, W. A. *Industrial-Social Education.* Milton Bradley Company, 1907.

BARROWS, G. H. *The History of Springfield for the Young.* Connecticut Valley Historical Society, 1909.

[1] This list does not include the books given at the close of Chapter One.

BENNETT, C. A. "The Place of Manual Arts in Education." *Educational Review*, Vol. 42, pages 245–253. 1911.

BENNETT, C. J. *Formal Discipline.* Teachers College, 1905.

BETTS, G. H. *The Recitation.* Houghton Mifflin Company, 1911.

BEVANS, G. E. "How One Thousand Workingmen Spend Their Spare Time." *The Outlook*, April 4, 1914.

BLAN, L. B. *A Special Study of the Incidence of Retardation.* Teachers College, 1911.

BLOOMFIELD, M. *The Vocational Guidance of Youth.* Houghton Mifflin Company, 1911.

BOBBITT, F. *The Curriculum.* Houghton Mifflin Company, 1918.

—— "Education for Leisure Occupations." *Superintendent's Report, South Bend, Indiana.* 1914.

—— "Literature in the Elementary Curriculum." *Elementary School Journal*, 14: 158–166. 1913.

—— *What the Schools Teach and Might Teach.* Survey Committee of the Cleveland Foundation, 1915.

BOLENIUS, EMMA. *Teaching Literature in the Grammar Grades and High School.* Houghton Mifflin Company, 1915.

BOLTON, F. E. *Principles of Education.* Charles Scribner's Sons, 1910.

BONSER, F. G. "Industrial Education." *Teachers College Record*, Vol. 12, No. 4, pages 25–43. 1911.

BOOK, W. F. *First Annual Report on Vocational Education in Indiana.* 1914.

BOURNE, R. S. *The Gary Schools.* Houghton Mifflin Company, 1916.

BOWEN, LOUISE. *Safeguards for City Youth.* The Macmillan Company, 1914.

BREED, F. S., and FROSTIE, F. W. "A Scale for Measuring the General Merit of English Composition in the Sixth Grade." *Elementary School Journal*, Vol. 17, pages 307–325.

BRIGGS, T. H. "Formal English Grammar as a Discipline." *Teachers College Record*, Vol. 14, No. 4, 1913.

BRIGGS, T. H., and COFFMAN, L. D. *Reading in Public Schools.* Row, Peterson & Co., 1905.

Brooks, S. D. "Causes of Withdrawal from School." *Educational Review*, Vol. 26, pages 362–393. 1903.

Bryant, Sara Cone. *How to Tell Stories to Children.* Houghton Mifflin Company, 1905.

Burris, W. P. *The Public School System of Gary, Indiana.* Bureau of Education Bulletin, No. 18, 1914.

Butler, N. M. *The Meaning of Education.* The Macmillan Company, 1903.

Butterfield, K. L. *Chapters in Rural Progress.* University of Chicago Press, 1913.

Carlton, F. T. *Education and Industrial Evolution.* The Macmillan Company, 1908.

Carney, Mabel. *Country Life and the Country School.* Row, Peterson & Co., 1912.

Carpenter, G. R., Baker, F. T., and Scott, F. N. *The Teaching of English in the Elementary and Secondary School.* Longmans, Green & Co., 1904.

Carver, T. N. *Principles of Rural Economics.* Ginn & Co., 1911.

Cather, Katherine Dunlap. *Educating by Story-telling.* World Book Company, 1918.

Chamberlain, A. F. *The Child: A Study in the Evolution of Man.* Charles Scribner's Sons, 1903.

Charters, W. W. *Methods of Teaching.* Row, Peterson & Co., 1912.

—— *Teaching the Common Branches.* Houghton Mifflin Company, 1913.

Chubb, Percival. *The Teaching of English.* The Macmillan Company, 1907.

Clopper, E. N. *Child Labor in City Streets.* The Macmillan Company, 1913.

Colby, J. R. *Literature and Life in School.* Houghton Mifflin Company, 1906.

Cole, P. R. *Industrial Education in the Elementary School.* Houghton Mifflin Company, 1914.

(Compiled.) *The Child in the City.* Chicago School of Civics and Philanthropy Press, 1912.

Cook, W. A., and O'Shea, M. V. *The Child and His Spelling.* The Bobbs-Merrill Company, 1914.

Cooley, E. G. *Vocational Education in Europe.* Chicago Commercial Club, 1912.

Cornman, O. P. *Spelling in the Elementary School.* Ginn & Co., 1902.

Courtis, S. A. *Courtis Standard Practice Tests in Arithmetic.* World Book Company, 1915.

—— "Standards in Rates of Reading." *Fourteenth Year Book of the National Society for the Study of Education,* 1915.

Cox, J. H. *Literature in the Common Schools.* Little, Brown & Co., 1908.

Crawshaw, F. D. *Needed Changes in Manual Arts.* National Education Association, pages 932–942. 1912.

Cubberley, E. P. *Changing Conceptions in Education.* Houghton Mifflin Company, 1909.

—— *Rural Life and Education.* Houghton Mifflin Company, 1914.

—— *School Organization and Administration.* World Book Company, 1916.

—— *The Improvement of Rural Schools.* Houghton Mifflin Company, 1912.

Curtis, H. S. *Education Through Play.* The Macmillan Company, 1915.

—— *Play and Recreation.* Ginn & Co., 1914.

Davenport, E. *Education for Efficiency.* D. C. Heath & Co., 1909.

Davidson, P. E. *The Recapitulation Theory and Human Infancy.* Teachers College, 1914.

Davis, J. B. *Vocational and Moral Guidance.* Ginn & Co., 1914.

Dean, A. D. *The Worker and the State.* The Century Company, 1910.

Dearborn, W. F. "Qualitative Elimination from School." *Elementary School Teacher,* Vol. 10, pages 1–13, 1909.

—— "The Relative Standing of Pupils in the High School and the University." *Bulletin of the University of Wisconsin,* 1909.

De Garmo, C. *The Essentials of Method.* D. C. Heath & Co., 1903.

—— *Herbart and the Herbartians.* Charles Scribner's Sons, 1896.

Denison, E. *Helping School Children.* Harper & Brothers, 1912.

DEWEY, J. *The Child and the Curriculum.* University of Chicago Press, 1908.

—— *Democracy and Education.* The Macmillan Company, 1916.

—— *The Educational Situation.* University of Chicago Press, 1904.

—— *Interest and Effort in Education.* Houghton Mifflin Company, 1913.

—— *Interest as Related to Will.* University of Chicago Press, 1903.

—— *Moral Principles in Education.* Houghton Mifflin Company, 1909.

—— *School and Society.* University of Chicago Press, 1915.

DEWEY, J. and E. *Schools of Tomorrow.* E. P. Dutton & Co., 1915.

DOOLEY, W. H. *The Education of the Ne'er-Do-Well.* Houghton Mifflin Company, 1916.

DOPP, KATHERINE. *The Place of Industries in Elementary Education.* University of Chicago Press, 1902.

DRAPER, A. S. *American Education.* Houghton Mifflin Company, 1909.

—— "Trade Schools" (*Our Children, Our Schools, and Our Industries*). C. W. Bardeen, 1908.

DUNN, A. W. "The Social Studies in Secondary Education." *Bureau of Education Bulletin,* No. 28, 1916.

DUTTON, S. T., and SNEDDEN, D. *Administration of Public Education in the United States.* The Macmillan Company, 1908.

EARHART, L. B. *Types of Teaching.* Houghton Mifflin Company, 1915.

ELIOT, C. W. *The Tendency to the Concrete and Practical in Modern Education.* Houghton Mifflin Company, 1913.

—— *Education for Efficiency.* Houghton Mifflin Company, 1909.

—— *The Training for an Effective Life.* Houghton Mifflin Company, 1915.

ELIOT, T. K. *The Juvenile Court and the Community.* The Macmillan Company, 1914.

ELLWOOD, C. A. *The Social Problem.* The Macmillan Company, 1915.

—— *Sociology and Modern Social Problems.* American Book Company, 1910.

ELY, R. T. *Studies in the Evolution of Industrial Society.* The Macmillan Company, 1911.

FARWELL, P. T. *Village Improvement.* The Macmillan Company, 1919.

FINDLAY, J. J. *Demonstration School Record No. 2.* University of Manchester Press, 1908.

FISKE, J. *The Meaning of Infancy.* Houghton Mifflin Company, 1909.

FLEXNER, A. *A Modern School.* General Education Board, 1916.

FORBUSH, W. B. *The Boy Problem.* The Pilgrim Press, 1902.

—— *The Coming Generation.* D. Appleton & Co., 1912.

FRANCIS W. PARKER SCHOOL. "The Social Motive in School Work." *School Year Book,* 1912.

FREEMAN, F. N. *Experimental Education.* Houghton Mifflin Company, 1916.

—— *How Children Learn.* Houghton Mifflin Company, 1917.

—— *The Psychology of the Common Branches.* Houghton Mifflin Company, 1916.

—— *The Teaching of Handwriting.* Houghton Mifflin Company, 1914.

GAYLEY, C. M. *Idols of Education.* Doubleday, Page & Co., 1912.

GEORGE, W. R. *The Junior Republic.* D. Appleton & Co., 1910.

GRAVES, F. P. *A History of Education* (in modern times). The Macmillan Company, 1913.

—— *A Student's History of Education.* The Macmillan Company, 1915.

GRIFFITH, I. S. *Essentials of Woodworking.* Manual Arts Press, 1908.

GROOS, K. *The Play of Man.* D. Appleton & Co., 1901.

HALIBURTON, MARGARET, and SMITH, AGNES. *Teaching Poetry in the Grades.* Houghton Mifflin Company, 1911.

HALL, G. S. *Adolescence.* D. Appleton & Co., 1904.

—— *Youth.* D. Appleton & Co., 1907.

HALL-QUEST, A. H. *Supervised Study.* The Macmillan Company, 1916.

HANUS, P. H. *The Beginnings in Industrial Education.* Houghton Mifflin Company, 1908.

—— *Educational Aims and Educational Values.* The Macmillan Company, 1902.

HANUS, P. H. "A Six-Year High School Program." *Educational Review*, 25: 455–463. 1903.

HART, J. K. *Educational Resources of Village and Rural Communities.* The Macmillan Company, 1914.

HECK, W. H. *Mental Discipline and Educational Values.* John Lane Company, 1909.

HEETER, S. L. "The School of Tomorrow." *Educational Review*, 42: 465–474. 1911.

HENDERSON, C. R. *Citizens in Industry.* D. Appleton & Co., 1915.

HENDERSON, E. N. *A Textbook in the Principles of Education.* The Macmillan Company, 1910.

HETHERINGTON, C. W. *The Demonstration Play School of 1913.* University of California.

HODGE, C. F. *Nature Study and Life.* Ginn & Co., 1902.

HOLMES, E. *What Is and What Might Be.* Archibald Constable & Co., London, 1911.

"Horace Mann School Course of Study." *Teachers College Record*, Vol. 7, No. 1. 1906.

HORN, E. *Distribution of Opportunity for Participation among the Various Pupils in Classroom Recitations.* Teachers College, 1914.

—— "Principles for Making Curricula in History." *Teachers College Record*, Vol. 16, No. 4, pages 33–59. 1915.

HUEY, E. B. *The Psychology and Pedagogy of Reading.* The Macmillan Company, 1908.

INGLIS, A. "Reorganization of the High School." *School Review*, 23: 307–318. 1915.

—— *Principles of Secondary Education.* Houghton Mifflin Company, 1918.

JAMES, W. *Talks to Teachers.* Henry Holt & Co., 1904.

JENKINS, FRANCIS. *Reading in the Primary Grades.* Houghton Mifflin Company, 1915.

JOHNSON, G. E. *Education by Plays and Games.* Ginn & Co., 1907.

—— *Education Through Recreation.* Survey Committee of the Cleveland Foundation, 1916.

JOHNSTON, C. H. *The Modern High School.* Charles Scribner's Sons, 1914.

—— *High School Education.* Charles Scribner's Sons, 1912.

JONES, A. L. "Entrance Examinations and College Records." Educational Review, 42: 217–233. 1911; *Educational Review*, 48: 190–122. 1914.

JUDD, C. H. "Types of Correlation." *Elementary School Journal*, 12: 34–39. 1911.

—— *Genetic Psychology for Teachers.* D. Appleton & Co., 1903.

—— *Measuring the Work of the Public Schools.* Survey Committee of the Cleveland Foundation, 1916.

—— *Psychology of High School Subjects.* Ginn & Co., 1915.

KELLEY, FLORENCE. *Modern Industry.* Longmans, Green & Co., 1914.

KELLY, F. J. *The Kansas Silent Reading Test.* Kansas State Printing Plant, 1915.

KENDALL, C. N., and MIRICK, G. A. *How to Teach the Fundamental Subjects.* Houghton Mifflin Company, 1915.

KERN, O. J. *Among Country Schools.* Ginn & Co., 1906.

KERSCHENSTEINER, G. *Education for Citizenship.* Rand-McNally & Co., 1911.

—— *The Idea of the Industrial School.* The Macmillan Company, 1913.

—— "The School of the Future: A School of Manual Arts." *School and Home Education*, 31: 278–286. 1912.

KEYES, C. H. *Progress through the Grades of City Schools.* Teachers College, 1911.

KILPATRICK, W. H. *The Montessori System Examined.* Houghton Mifflin Company, 1914.

KIRKPATRICK, E. A. *Fundamentals of Child Study.* The Macmillan Company, 1903.

—— *The Individual in the Making.* Houghton Mifflin Company, 1911.

KLAPPER, PAUL. *Teaching Children to Read.* D. Appleton & Co., 1916.

—— *The Teaching of Arithmetic.* D. Appleton & Co., 1916.

LAPP, J. A., and MOTE, C. H. *Learning to Earn.* Bobbs-Merrill Company, 1915.

LEAKE, A. H. *Industrial Education.* Houghton Mifflin Company, 1913.

LEAVITT, F. M. *Examples of Industrial Education.* Ginn & Co., 1912.

—— "The Place of Technique in Elementary Manual Training." *Elementary School Journal,* 5: 72–76. 1904.

LEAVITT, F. M., and BROWN, EDITH. *Prevocational Education in the Public Schools.* Houghton Mifflin Company, 1915.

LEE, J. *Constructive and Preventive Philanthropy.* The Macmillan Company, 1902.

—— "Playground Education." *Educational Review,* 22: 449–471. 1901.

—— *Play in Education.* The Macmillan Company, 1917.

LOWELL, A. L. "College Studies and Professional Training." *Educational Review,* 42: 217–233. 1911.

MAHONEY, JOHN J. *Standards in English.* World Book Company, 1917.

MCMANIS, J. T. "Individual Differences in the Early Grades." *School and Society,* 3: 289–295. 1916.

MCMURRY, C. A. *Course of Study in the Eight Grades.* The Macmillan Company, 1906.

—— *The Elements of General Method.* The Macmillan Company, 1904.

MCMURRY, C. A. and F. M. *The Method of the Recitation.* The Macmillan Company, 1903.

MCMURRY, F. M. "Controlling Ideas throughout the Curriculum." *Teachers College Record,* Vol. 4: No. 2, 1–13. 1903.

—— *Elementary School Standards.* World Book Company, 1914.

—— *How to Study and Teaching How to Study.* Houghton Mifflin Company, 1909.

—— "Principles Underlying Making of Curricula." *Teachers College Record,* Vol. 16, No. 4, pages 1–32. 1915.

—— *What Omissions Are Advisable in the Present Course of Study, and What Should Be the Basis for the Same.* National Education Association, 194–202. 1904.

—— *Uniform Curriculum and Examinations.* National Education Association, 130–148. 1913.

MCMURRY, L. B. *A Method for Teaching Primary Reading.* The Macmillan Company, 1914.

MAJOR, J. W. *The Withdrawal of Pupils from School.* (Master's Thesis.) University of Missouri, 1906.

MANGOLD, G. B. *Child Problem.* The Macmillan Company, 1910.

MARTEN, W. S. *Manual Training Play Problems.* The Macmillan Company, 1917.

MERIAM, J. L. "How Well May Pupils Be Prepared for High School Work without Studying Arithmetic, Grammar, etc., in the Grades." *Journal of Educational Psychology,* 6: 361–368. 1915.

—— "Measuring School Work in Terms of Life Out of School." *School and Society,* 5: 339–342. 1917.

—— "Play as a Motive." *Proceedings of the Missouri State Teachers' Association,* 1909.

MONROE, P. *Cyclopedia of Education.* The Macmillan Company, 1913.

—— *Principles of Secondary Education.* The Macmillan Company, 1914.

MONROE, W. S., DE VOSS, J. C., and KELLY, F. J. *Educational Tests and Measurements.* Houghton Mifflin Company, 1917.

MONTESSORI, M. *The Montessori Method.* F. A. Stokes Company, 1912.

MUNROE, J. P. *New Demands in Education.* Doubleday, Page & Co., 1912.

MYERS, G. C. "Some Factors Affecting Content of Curricula." *School Supervision and Administration,* 1: 611–616. 1915.

NEARING, SCOTT. *Social Adjustment.* The Macmillan Company, 1912.

NORSWORTHY, N., and WHITLEY, M. T. *The Psychology of Childhood.* The Macmillan Company, 1918.

PAGE, W. H. *The Rebuilding of Old Commonwealths.* Doubleday, Page & Co., 1902.

PARKER, S. C. *The History of Modern Elementary Education.* Ginn & Co., 1912.

—— *Methods of Teaching in High Schools.* Ginn & Co., 1915.

PARSONS, F. *Choosing a Vocation.* Houghton Mifflin Company, 1909.

PAULSEN, F. *German Education.* T. Fisher Unwin, London, 1908.

PAYNE, B. R. *Public Elementary School Curricula.* Silver, Burdett & Co., 1905.

PERRY, C. A. *The Extension of Public Education.* Bureau of Education Bulletin, No. 28. 1915.

—— *Wider Use of the School Plant.* Charities Publication Committee, 1910.

PUFFER, J. A. *The Boy and His Gang.* Houghton Mifflin Company, 1912.

—— *Vocational Guidance.* Rand-McNally & Co., 1913.

RAPEER, L. W., and OTHERS. *Teaching Elementary School Subjects.* Charles Scribner's Sons, 1917.

REEDER, R. R. *How Two Hundred Children Live and Learn.* Charities Publication Committee, 1909.

REIN, W. *Outlines of Pedagogics.* E. L. Kellogg & Co., 1893.

REPORTS: Bureau of Labor Statistics, New York, 1908.

—— Commissioner of Labor, United States, 1911.

—— Commission on Industrial Education, Massachusetts, 1908.

—— Committee of Fifteen on Elementary Education. American Book Company, 1895.

—— Committee of Ten on Secondary School Studies. American Book Company, 1894.

—— Committee on a Normal Course in Play. Proceedings of the Third Annual Congress of the Playground Association of America, 1909.

—— Conditions under which Children Leave School. United States Bureau of Labor, 1910.

—— Course of Study for Elementary Schools. New York State Educational Department, 1910.

—— Economy of Time in Education. Bureau of Education Bulletin, No. 38, 1913.

—— Minimum Essentials. Fourteenth Year Book of the National Society for the Study of Education, 1915.

—— Ninth Yearbook, Superintendents' and Principals' Association of Northern Illinois, 1914.

—— The Place of Industries in Public Education. National Education Association, 1910.

Reports: Reorganization of Secondary Education. Bureau of Education Bulletin, No. 41, 1913, and No. 35, 1918.

—— Vocational Training in Chicago and in other Cities. City Club of Chicago, 1912.

—— When and Why Children Fail. New York Bureau of Municipal Research, 1911.

Rice, J. M. *Scientific Management in Education.* Publisher's Printing Company, 1913.

Riley, J. L. *The Springfield Tests, 1846–1906: A Study in the Three R's.* The Holden Patent Book Cover Company, Springfield, Massachusetts, 1908.

Robinson, J. H. *The New History.* The Macmillan Company, 1912.

Rooper, T. G. *Apperception: A Plot of Green Feathers.* C. W. Bardeen, 1891.

Row, R. K. *The Educational Meaning of Manual Arts and Industries.* Row, Peterson & Co., 1909.

Rugg, H. O. *The Experimental Determination of Mental Discipline in School Studies.* Warwick & York, 1916.

—— *Statistical Methods Applied to Education.* (See bibliography at the close for further studies.) Houghton Mifflin Company, 1917.

Russell, J. E. "The School and Industrial Life." *Educational Review,* 38: 433–450. 1909.

Sadler, M. E. *Continuation Schools in England and Elsewhere.* University of Manchester Press, 1907.

Sargent, W. *Fine and Industrial Arts in Elementary Schools.* Ginn & Co., 1912.

Scott, C. A. *Social Education.* Ginn & Co., 1908.

Search, P. W. *An Ideal School.* D. Appleton & Co., 1903.

Sharp, F. C. *Education for Character.* Bobbs-Merrill Company, 1917.

Siders, W. R. *In Class Instruction, How Can the Individual Be Reached?* National Education Association, 175–182. 1909.

Smith, D. E. *The Teaching of Elementary Mathematics.* The Macmillan Company, 1903.

Sneath, E. H., and Hodges, G. *Moral Training in the School and Home.* The Macmillan Company, 1913.

SNEDDEN, D. "Practical Arts." *Educational Review*, 43: 378–386. 1912.

—— *Problems of Educational Readjustment.* Houghton Mifflin Company, 1913.

—— *The Problem of Vocational Education.* Houghton Mifflin Company, 1910.

SOLDAN, F. LOUIS. "Shortening the Period of Elementary Schooling." *Educational Review*, 25: 168–181. 1903.

SPARGO, J. *The Bitter Cry of the Children.* The Macmillan Company, 1909.

STAPLES, O. B. "Is There a Relation between the Amount of Schooling and Financial Success in Life?" *Elementary School Teacher*, 10: 261–269. 1910.

STARCH, D. *Educational Measurements.* The Macmillan Company, 1916.

STONE, C. W. *Arithmetical Abilities and Some Factors Determining Them.* Teachers College, 1908.

STOUT, J. E. *The High School.* D. C. Heath & Co., 1914.

STRAYER, G. D. *A Brief Course in the Teaching Process.* The Macmillan Company, 1911.

STRAYER, G. D., and NORSWORTHY, NAOMI. *How to Teach.* The Macmillan Company, 1917.

STRAYER, G. D., and THORNDIKE, E. L. *Educational Administration.* The Macmillan Company, 1913.

SURVEYS (Only a few of the leading surveys are here listed.)

Baltimore, Maryland (1911).
Butte, Montana (1914).
Cincinnati, Ohio (1915) — Industrial Survey.
East Orange, New Jersey (1912).
Hammond, Indiana (1915) — People, Industries, and Schools.
Indianapolis, Indiana (1917) — Vocational Education.
Lane County, Oregon (1916).
Leavenworth, Kansas (1915).
Maryland (1912) — Rural.
Minneapolis, Minnesota (1913) — Vocational Survey.
Montgomery County, Maryland (1913).
New Orleans (1914).

Surveys (*continued*).
New York City (1912).
Oakland, California (1915).
Ohio (1914).
Portland, Oregon (1913).
Richmond, Virginia (1916) — Vocational Survey.
Salt Lake City, Utah (1915).
South Bend, Indiana (1914).
Springfield, Illinois (1914).
St. Louis, Missouri (1917).
Vermont (1914).
Wisconsin (1912) — Rural Schools.

Suzzallo, H. *The Teaching of Primary Arithmetic.* Houghton Mifflin Company, 1911.

—— *The Teaching of Spelling.* Houghton Mifflin Company, 1911.

Terman, L. M. *The Measurement of Intelligence.* Houghton Mifflin Company, 1916.

Thomas, F. W. *The Apprentice Schools of the Santa Fé Railway System.* National Education Association, 175–185. 1914.

Thorndike, E. L. "The Elimination of Pupils from School." *Bureau of Education Bulletin,* No. 4, 1907.

—— *Educational Psychology.* Teachers College, 1913–1914.

—— "The Future of the College Entrance Examination Board." *Educational Review,* 31: 470–483. 1906.

—— *Individuality.* Houghton Mifflin Company, 1911.

—— *The Principles of Teaching.* A. G. Seiler, 1906.

—— *An Introduction to the Theory of Mental and Social Measurements.* Science Press, 1904.

—— "The Measurement of Ability in Reading." *Teachers College Record,* Vol. 15, No. 4, 1914.

Tidyman, W. F. *The Teaching of Spelling.* World Book Company, 1918.

Travis, T. *The Young Malefactor.* Thomas Y. Crowell Company, 1912.

Tyler, J. M. *Growth and Education.* Houghton Mifflin Company, 1907.

VINCENT, G. E. *The Social Mind and Education.* The Macmillan Company, 1897.

WEEKS, RUTH. *The People's School.* Houghton Mifflin Company, 1912.

WHIPPLE, G. M. *Manual of Mental and Physical Tests.* Warwick & York, 1910.

WILLISTON, A. L. *Types of Schools for Different Pupils.* National Education Association, pages 567–571. 1913.

WILSON, H. B. and G. M. *The Motivation of School Work.* Houghton Mifflin Company, 1916.

WILSON, W. H. *The Evolution of a Country Community.* The Pilgrim Press, 1912.

WITHERS, J. W. *How the Course of Study Should Be Determined.* National Education Association, pages 235–243. 1914.

WOODHULL, J. T. "General Science." *Educational Review*, 48: 298–300. 1914.

WOODWARD, C. M. "Age of Withdrawal from Public Schools." *Report, Commissioner of Education*, 1161–1170. 1894–1895.

—— "When and Why Pupils Leave School." *Report, Commissioner of Education*, 1364–1374. 1899–1900.

YOCUM, A. D. *The Determinants of the Course of Study.* National Education Association, 223–235. 1914.

YOUNG, J. W. A. *The Teaching of Mathematics in the Elementary and Secondary School.* Longmans, Green & Co., 1907.

ZUEBLIN, C. *American Municipal Progress.* The Macmillan Company, 1916.

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